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### **Student nurses' perceptions of their hospital placement in Barbados: A mixed methods approach**

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**Student nurses' perceptions of their hospital placement in Barbados:  
A mixed methods approach**

Sonia Christeen Watson-Miller

A thesis submitted for the degree of Professional Doctorate in Health

University of Bath  
Department of Health

August 2015

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## **Dedication**

This thesis is dedicated to my grandparents, Sidney and Silverline Watson, who went into eternal rest prior to the completion of this research journey.

### **Psalm 121, NKJV**

I will lift up my eyes to the hills-  
From whence comes my help?  
My help comes from the Lord,  
Who made heaven and earth.

He will not allow your foot to be moved;  
He who keeps you will not slumber.  
Behold, He who keeps Israel  
Shall neither slumber or sleep.

The Lord is your keeper;  
The Lord is your shade at your right hand.  
The sun shall not strike you by day,  
Nor the moon by night.

The Lord shall preserve you from all evil;  
He shall preserve your soul.  
The Lord shall preserve your going out and your coming in  
From this time forth, and even forevermore.

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## Abstract

**Background:** Practical training on hospital wards is a major component of basic nurse training. With this in mind, there were concerns with respect to the ability to provide nursing students with the quality of clinical experience that is required as a result of changes in the Barbados nursing policy to increase the number of students.

**Aim:** The overall aim of this research was to understand student nurses' clinical placement learning experience at the Queen Elizabeth Hospital in Barbados, based on their current and desired clinical experiences.

**Research objectives:** (1) to examine the student nurses' current learning experiences at the hospital; (2) to determine the student nurses' desired experiences at the hospital; and, (3) to compare and contrast their current clinical experience with their desired experience by integrating the data across the quantitative and qualitative studies.

**Design:** A sequential explanatory mixed methods research.

**Methods:** *First study:* The *Clinical Learning Environment Inventory* (CLEI) (current and desired form) and the *Clinical Learning Environment, Supervision and Nurse Teacher* (CLES+T) questionnaires were distributed to second and third year student nurses ( $n = 191$ ) at the Barbados Community College. Descriptive and inferential analysis performed.

*Second study:* Qualitative semi-structured interviews ( $n = 10$ ) among second and third year student nurses analysed thematically.

**Results:** *Quantitative survey (First study):* 'Student satisfaction' (mean 25.74 of 35), 'Task orientation' (mean 25.62 of 35), the 'Leadership style of the ward sister' (mean 4.02 of 5) and 'Premises of nursing care on the ward' (mean 4.01 of 5) greatly informed students' actual hospital experience. The current and desired hospital experiences were statistically significant different ( $z = 6.68$  to  $8.07$ ,  $p = 0.000$ ).

*Qualitative interviews (Second study):* Four overarching themes were generated: 'Engaged, proactive and communicative team'; 'No cohesion among team'; 'Students – willing to learn and motivated'; and, 'Consequences – positive and negative'.

*Overarching findings from both studies:* Four major topics describe the student nurses' experiences: 'Engagement of the ward nursing team', 'The nature of nursing care delivery', 'Clinical supervision and teaching of nursing students on the ward', and 'Nursing student satisfaction'.

**Conclusion:** The ward sister influences the ward team spirit and students' clinical learning, negatively or positively. Nurse educators should acknowledge the value of clear, well organised ward activities on students' learning. Clinical nursing curricula should be based on a blended educational learning perspective.

## **List of abbreviations**

BCC:	Barbados Community College
CARICOM:	Caribbean Community
CLE:	Clinical Learning Environment
CLEI:	Clinical Learning Environment Inventory
CLES+T:	Clinical Learning Environment, Supervision and Nurse Teacher evaluation scale
QEH	Queen Elizabeth Hospital
RENr:	Regional Examinations for Nurse Registration in CARICOM countries

## **Glossary of Terms**

**Clinical instructor:** In this research thesis the term refers to a qualified nurse employed by the Barbados Community College as a clinical teacher of nursing students. Their roles are: (1) to facilitate student nurses in meeting their clinical learning objectives in the clinical skills laboratory; (2) supervise student nurses on clinical placements; and, (3) assess and evaluate student nurses' progress. Some clinical instructors have dual responsibility for classroom and clinical teaching.

### **Clinical learning**

**environment:** Refers to a clinical unit or ward within health care facilities in which student nurses are assigned for practical training (Clare, Edwards, Brown, White, & van Loon, 2003). The environment consists of several factors influencing the students' clinical learning (Dunn & Burnett 1995).

**Clinical placement:** Refers to assigned clinical units or wards within health care facilities for practical training of student nurses, in order to link classroom theory with practice (Clare et al., 2003).

**Nursing student:** Sometimes interchanged with the term 'student nurse' refers to an individual enrolled in a nurse training programme with a view to license as a registered nurse.

### **Supervising registered**

**nurse:** A term used in this research thesis to describe a qualified nurse who guides, supports and assesses the student nurse on their assigned clinical unit or ward.



**Supervision:** The term is used to describe the responsibilities of guiding, assessing and the teaching of student nurses by clinical staff or clinical instructors.

**Ward sister:** Refers to a qualified nurse in charge of a hospital unit or ward and a team of nurses.

# **Chapter One: Historical and global changes to nursing education and nursing students' perception of the role of the clinical placement in entry-level nurse training**

## **1.1 Introduction**

Student nurses' clinical placement and experience are important aspects of entry level nurse training (Nursing Education Network Bulletin, 2014). The majority of these experiences occur on clinical sites, such as hospitals, as an assigned clinical placement (Henderson, Cooke, Creedy, & Walker, 2012). On clinical placements student nurses apply classroom knowledge to real clinical situations, construct a nursing identity and achieve minimum competence for initial professional nursing registration (Chan, 2001a; Hughes & Quinn, 2013). In Barbados, the Queen Elizabeth Hospital (QEH) is the major clinical site for practical training of student nurses. Thus, exploring the local student nurses' learning experience at the QEH will be informative to nurse educators and health care administrators in Barbados.

To determine the best method to explore student nurses' practice placement experience, a review of the literature was considered necessary and this will be covered in this chapter. This chapter outlines the thesis, provides a background on entry-level nurse training globally and in Barbados, as well as an overview of the general learning theories. An outline of the search strategy is provided followed by a review of the literature regarding nursing students' practice placement experience. It is necessary to understand the review in the context of learning theories and this will be discussed. It is presumed that this knowledge can provide initial insights into the manner in which the success of the clinical placement can be assessed. The chapter ends with a summary of the literature in relation to the delivery of nurse training in Barbados and provides a rationale for the current research. Finally, the overarching research questions are presented.

### **1.1.2 Outline of the thesis**

This thesis is composed of six chapters. This chapter (Chapter one) sets the research in context as outlined above.

Chapter two will provide a review of student-based outcome instruments in order to identify their psychometric qualities and determine the appropriate tool(s) to measure the clinical placement in a hospital setting from student nurses' perspective.

Chapter three describes the general methodology employed for the current research thesis. Firstly, it outlines the overarching research aim, objectives and research questions. Secondly, the mixed methods research approach, in particular sequential explanatory design, as a methodology and its application to the current research thesis are discussed. Thirdly, it explains how a pragmatic philosophical position informs the current research. The chapter next addresses the rationale for the order of the studies. Finally, the ethics approval for the research studies is described.

Chapter four presents the first study which is quantitative in nature. First, the aims and research questions of the quantitative study are described. The theoretical basis underpinning the numerical data, data collection, analysis and ethical issues are presented. The results are presented next and the chapter ends with a discussion of the data.

Chapter five focuses on the second study which presents inductive data. The qualitative interviews further explore the issues highlighted in the questionnaire study. The chapter outlines the research question to be addressed and describes the theoretical perspective underpinning the inductive data. The data collection, analysis, the reflexivity and ethical issues are presented. The inductive data are reported on and the findings discussed.

Chapter six provides a summary of the thesis and an overview of the findings from both studies. Based on the integrated data, it then discusses the broad central tenets that are relevant to nursing students' learning in a Barbadian hospital setting within the context of the literature and learning theories. The limitations and possible implications for nurse training are next considered after which a conclusion is drawn. Finally, a reflection is presented.

## **1.2 Background**

This section presents a global and Barbadian context for nurse training followed by an overview of learning theories.

### **1.2.1 Global context of entry-level nurse training**

The term 'nurse' refers to an individual who is trained and licensed to care for individuals and families, sick or well, and the dying (Henderson, 1966; International Council of Nursing, 2009; Mosby's Dictionary of Medicine, Nursing & Health Professions, 2013). Due to developments in professional nursing, registered nurses' roles now include research, health promotion, policy-making, management, and education (International Council of Nurses, 2009). Professional nursing bodies oversee the regulation of nurse training and nursing practice within their respective countries or individual states (Taylor, Lillis, LeMone, P. & Lynn, 2011).

The historical developments of basic nurse training vary across countries. Generally, formalised training commenced from the mid-nineteenth century in the form of an in-hospital nurse training apprenticeship system (Donahue, 2011). By the twentieth century training of student nurses was being transferred to colleges and universities (Donahue, 2011). Internationally, the structure of basic nurse training consists of classroom theory and practical training usually delivered in a modular structure (Spouse, 2000; Potter, Perry, Stockert & Hall, 2013; Yang, 2013). The length of nursing programmes varies between countries (World Health Organization, 2009; Warne et al., 2010). For instance, in the United States

of America, basic nurse training programmes ranged from a two years associate degree (diploma) to four years bachelor degree programmes (Taylor et al., 2011). In Australia, United Kingdom and New Zealand basic nurse training is a 3 year bachelor degree qualification (Nursing and Midwifery Council, 2010; Peters, Halcomb, & McInnes, 2013; Watson et al., 2014).

Internationally, the structure of the clinical placement also varies (Donnelly & Wiechula, 2012; Nursing Education Network Bulletin, 2014), for instance, Australia has a minimum duration of clinical placement of 800 hours, but it ranges from 680 to 1320 hours between universities (Australian Nursing and Midwifery Council, 2009). The minimum clinical placement contract hours in the European Union is 2300 hours (Nursing Education Network Bulletin, 2014). The literature describes several supervisory models and formats facilitating student nurses on placement (see Budgen and Gamroth, 2008; Franklin, 2013).

### **1.2.2 Nursing Education in Barbados**

Barbados is an English-speaking island located easterly from the Caribbean chain of islands (BGIS Media, 2014). In Barbados, the word 'nurse' was initially used in 1844 when the first public general hospital opened (Walters, 1995). Historically, nurse training developments have been sporadic within the country (see Table 1). A Regional Nursing Body (RNB) was established in 1972 to standardise nursing practice and training around the English-speaking Caribbean countries (Reid, 2000). This resulted in limited improvements in the quality of nurse training (Walters, 1995; Hunte, 2009). Therefore, a regional professional nursing examination was implemented in 1993 to further standardize the training of student nurses (Reid, 2000). Consequently, it allowed qualified nurses to hold a Caribbean Community (CARICOM) nursing license in order to practice in any CARICOM member country (Reid, 2000; Salmon, Yan, Hewitt & Guisinger, 2007).

Table 1: Historical developments in nurse training in Barbados

Timeframe	Historical developments
Prior 1932	No formal training of nurses. The term for student nurses was 'Probationers' referring to students whom were trained through employment
1932	Formalised nurse training began with the establishment of a Midwives and Nurses Registration Act and a nursing regulatory body
Late 1950s	As a result of returning nationals from England, the island saw an increase in locally-recruited qualified nurses to educational and senior nursing administrative roles
1960s	Research studies conducted on basic nurse training in the English-Speaking Caribbean region
1972	A Regional Nursing Body (RNB) established due to variation of basic nurse training among English-speaking Caribbean countries
1986	Transfer of in-hospital nurse training system to Barbados Community College
1988	Moved from Certificate to Associate Degree in Applied Science in General Nursing (diploma equivalent) programme based on a credit-based modular nurse training programme at the Barbados Community College (BCC)
1993	Implementation of a Caribbean-based Regional Examination for Nurse Registration (RENr) administered by RENr

Walters, 1995; Hunt, 2009

In Barbados, student nurses must complete a 3-year Nursing Council of Barbados approved programme. The Barbados Community College's (BCC) Associate Degree is the sole nurse training programme, consisting of 107 credits (Barbados Community College Division of Health Sciences, 2008). See Table 2 for an example of a training transcript. Student nurses are assigned to practical skills laboratory training during the first year of the programme. The length of clinical placements is 768 hours in Year 2, and 1,192 hours in Year 3 (Barbados Community College Division of Health Sciences, 2012). Placements run concurrently with classroom theory during the semesters and consolidated during the extended summer period. Periodically, adjustments have been made to clinical placement length to accommodate the large student enrolment population. The majority of clinical placements are undertaken in the government-funded hospital, Queen Elizabeth Hospital. The hospital consists of a range of medical and surgical specialities, and outpatient services (Hunte, 2009). The personnel supervising student nurses on placement are clinical instructors from the college and on-site registered nurses. Various strategies have been implemented to address the shortage of nurses on the island. These include recruitment from other countries and increasing student enrolment (Hunte, 2009; Sealy, 2009).

A policy decision was taken at the senior administrative level in health and education, to increase the student nurses enrolment to 120 from 90 students for the academic year 2006-2007 (Sealy, 2011). The challenges faced since the establishment of this policy decision include limited resources, increased the nurses supervision workload, and ineffective supervision of student nurses (Sealy, 2009; The Nursing Council of Barbados, 2008). An audit on the quality of nurse training in Barbados revealed clinical instructor/student ratio on clinical placement was 1:23 as opposed to the recommended 1:8-10 (The Nursing Council of Barbados, 2008).

Table 2: Basic general nursing associate degree programme - 3 years: example of transcript of training, 2011

Theoretical instruction	Hours	Practical training	Hours
Sociology	45	Skill laboratory	352
Nursing professionalism	30	Medical nursing	384
Health Promotion and Lab	90 + 28 <sup>1</sup>	Surgical nursing	360
Anatomy & Physiology I	45	ENT nursing	40
Psychology	45	A&E	56
English & Communication	45	Paediatric nursing	128
Community Health	45	Geriatric nursing	136
Epidemiology	30	Community Health	184
Anatomy & Physiology II	45	Psychiatric nursing	160
Practical Mathematics	45	Obstetric nursing	144
Microbiology	30	Operating theatre	40
Nursing Fundamentals and Lab	90 + 28	Recovery Room	40
Cardiopulmonary Resuscitation & First Aid	30	Artificial Kidney Unit	48
Pharmacology 1	30	Ophthalmology	40
Pathophysiology	45	Orthopaedics	40
Adult nursing 1 and Lab	90 + 28	Intensive care unit	120
Pharmacology 1	30		
Geriatrics	45		
Nutrition Therapy	45		
Adult nursing 2 and Lab	90 + 28		
Paediatric nursing	60		
Obstetrics	60		
Research methods	45		
Disaster preparedness	45		
Caribbean politics & society	45		
Management	45		
Psychiatric nursing	60		
Ethics & Citizenship	45		
<b>Total</b>	<b>1507</b>	<b>Total</b>	<b>2272</b>

ENT - Ears, nose and throat; A&E - Accident & Emergency

<sup>1</sup> +28 indicate 28 hours of concurrent skill laboratory attached to the appropriate theoretical module.



During my tenure as Clinical Co-ordinator in the nursing department, many expressions of concern and dissatisfaction were received from nursing staff, clinical instructors and student nurses concerning students' clinical placement. Globally, entry-level nurse training and structure of clinical placement for student nurses differs. In Barbados, there is a lack of in-depth research on the success of the clinical placement on student nurses' learning. Evidence-based research is needed to identify issues impacting student nurses' hospital learning experiences from the students' standpoint in order to improve their placement experiences.

### **1.2.3 Learning theories**

Learning refers to a change in a student's thoughts, feelings and actions due to acquisition of new information or practical skills (Braungart, Braungart, & Gramet, 2014). There are four basic perspectives of learning: behavioural, cognitive, constructive, and humanistic (McIntosh, 2011; Slavin, 2011). This section will briefly describe the learning theories in general and will serve as a background to understanding the literature on student nurses' placement experience.

#### *Behavioural learning theories*

Behavioural learning theory focuses on assessing changes in a student's behaviour (i.e., information, skills) (Lovell, 2011). It assumes that learning is conditioned and the learning environment is controllable (Braungart et al. 2014; Lovell, 2011; Pritchard, 2014). Reinforcements are used to strengthen the information or skill being learnt, while punishers weaken it (Pritchard, 2014). The effect of reinforcers and punishers on behaviour is referred to as consequences (Slavin, 2011). Students also learn by trial and error (McKenna, 1995a). However, when the student ceases to utilise the learnt information or practice the particular skill, the information or skill is gradually lost (Braungart et al., 2014). In summary, students passively learn from their teacher (McKenna, 1995a).

Educators are interested in assessing the competencies of student nurses in the clinical setting to ensure that students are fit to practice as professional nurses

(Wu, Enskär, Lee & Wang, 2015). Reviews have suggested three key tenets of competencies in nursing: demonstrating practical skills (doing/action), knowledge (thinking) and interpersonal skills (attributes to possess) (Cowan, Norman & Coopamah, 2005; Yanhua & Watson, 2011). Over time the student gradually develops proficiencies in each element and moves from the stages of novice to expert (Benner, 1982). Behaviourists view competencies in nursing from the perspective of observing students' repetitive practice of specific clinical tasks or skills (Cowan et al., 2005; Garside & Nhemachena, 2013). Although nursing is a practice-based profession, critics of the behaviourists' approach recommend the use of a holistic approach to competence (Cowan et al., 2005; Garside & Nhemachena, 2013). This perspective means that the students bring together knowledge, critical thinking skills, affective (values and feelings), and psychomotor skills (clinical tasks) relevant for the specific clinical situation (Yanhua & Watson, 2011). Difficulty arises in assessing competencies when knowledge and acceptable attitudes are involved (McMullan et al., 2003).

#### Cognitive learning theories

Cognitive learning theorists focus on the mental action comprising learning (McKenna, 1995b; Pugsley 2011). The teacher assists the student in relating the information or skill being learnt to prior knowledge stored in the brain (Braungart et al., 2014; Slavin, 2011). Insightful learning, a concept developed by the Gestalt theorists, refers to the manner in which a student links relevant, but separate information in order to understand new concepts (McKenna, 1995b). Through the aid of information processing, the processing, retrieving and relaying of information between the short-term and long-term memory is better understood (Braungart et al., 2014, Slavin, 2011).

#### Constructive learning theories

Constructivist learning theorists share common perspectives on learning which includes beliefs that there are multiple views of what has been learnt; prior experience and knowledge are crucial to learning; and the teacher facilitates learning (Driscoll, 2009; Hean, Craddock & O'Halloran, 2009). The constructivist approach consists of two perspectives, cognitive constructivism and social

constructivism (Hean et al., 2009). The former explains learning based on how the student formulates new knowledge from their environment, while the latter explains learning based on interaction and language (Atherton, 2009; Braungart et al., 2014; Leinster, 2009).

The two principles of cognitive constructive learning theory are assimilation and accommodation of acquiring new information (Hean et al., 2009). Assimilation is learning by linking the new information with existing information (Hean et al., 2009). However, when the information acquired is in conflict with existing knowledge, the student would modify the information to better understand it. This is termed accommodation (Slavin, 2011).

Two major views are held by social constructivist learning theorists: (1) the setting consists of experts and (2) there must be a zone of proximal development (ZPD) (Hean et al., 2009). ZPD is when the student is assisted by an expert who facilitates learning (Hean et al., 2009; Braungart et al., 2014). The information or skill gained within the ZPD through the assistance of the expert helps the student to eventually move from the ZPD and function independently.

Situated learning theory is based on a social constructivist approach (White, 2010). It refers to a student acquiring information and skill in a real environment (authentic setting) for learning (Lave & Wenger, 1991). The student would integrate the information or skill in a real situation through engaging in the 'community of practice' (Wenger, 1998). The student participates peripherally in the activities and this is referred to as 'legitimate peripheral participation' (Lave & Wenger, 1991). But as the student becomes competent and accepted into the setting or situation, they move from being a peripheral member to a fully participating member (the centre) (Wenger, 1998).

### Humanistic learning theories

Humanistic learning theorists study the affective (feelings, emotions, values), thinking and experiential aspects of student's behaviour (Hughes & Quinn, 2013). The teacher facilitates learning and motivates students to learn (McKenna, 1995c; Pugsley, 2011). Students should be assisted to reach their maximum potential – a process called self-actualization (Maslow, 1943; McKenna, 1995c). Carl Rogers (1902-1987), a humanistic psychologist, argued that learning processes should be student-oriented, focusing on the relevance of the information being learnt, the active participation of the student, self-assessment, and a supportive environment (Rogers & Freiberg, 1994). Rogers proposed a learning continuum defined at one extreme on learning based solely on thought (meaningless) while the opposite end consists of both thought and emotions making learning more meaningful (Rogers & Freiberg, 1994). Experiential learning is another humanistic approach where students learn from their experiences (Kolb, 1984; Hughes & Quinn, 2013).

Educationalist Malcolm Knowles (1913-1997) contributed the concept of 'andragogy' referring to adult learning (McKenna 1995c, Pugsley 2011). Knowles viewed adults as self-directed experienced individuals, which impacts on learning (McKenna 1995c). One major flaw in the humanistic explanation of learning is the lack of scientific evidence to support its assumptions (Braungart et al. 2014).

In summary, each of the learning perspectives discussed focused on different aspects of learning. They elucidate the complex process by which students learn. The clinical placement provides opportunities for most of these types of learning to take place, thus a literature review of student nurses' educational experiences on placement was undertaken.

### **1.3 Search strategy**

The review focused on literature examining undergraduate nursing students' views of their experience in the practice setting. The literature review time-frame

was from the inception of each database, to the date of discontinuing the search which was January 2015. This time-frame allowed for identification of relevant literature. The search included use of the electronic bibliographic databases: PubMed (from 1950), Web of Science (from 1865), Cumulative Index to Nursing and Allied Health Literature (CINAHL) (from 1960), and education-related databases (Dialog DataStar Education Indexes (from 1966) and ProQuest Education Indexes (from 1975)). Only articles written in English were included due to a lack of translation resources. Additionally, the Google internet search engine [Google Scholar] was utilised. The search process continued by checking articles' reference lists for possible related material. A PICO search strategy was used to find appropriate literature (see Table 3).

The Matrix Method (Garrard, 2011) was used to evaluate the retrieved papers. The process involved evaluating each paper in ascending chronological order using a structured abstracting form with 7 topics: journal identification, purpose, methodological design, sampling design, number of subjects (including respondents' analysis, subject characteristics), data collection methods and results/findings.

Table 3: Search terms used in searching the literature

Population	Intervention/Descriptor	Outcome
Undergraduate	Learning environment	Experience
Student	Clinical	Perception
Nursing	Clinical practice	
Health professional	Clinical placement	
	Clinical education	

One hundred and fifteen papers were found, with 70 excluded due to irrelevance. Papers were deemed irrelevant if the sample was not germane to entry-level student nurses or if the topic was irrelevant to 'clinical placement learning

experiences' or there was no hospital setting included. The remaining 45 papers were reviewed.

## **1.4 Results**

The findings were categorised under six key topics as the literature was reviewed. The topics include the clinical setting as a learning environment; belonging and feeling accepted; clinical supervision; peer support; learning opportunities; and, theory-practice gap.

### **1.4.1 The clinical setting as a learning environment**

Initially, the concept 'ward learning environment' was ascribed to the clinical settings used for practical training (Fretwell, 1980; Orton, 1981) but it lacked a clear definition. Dunn and Burnett (1995) conceptualised the term 'clinical learning environment' rooted in classroom learning environment literature. They suggested that the 'clinical learning environment' involves various features which influence each other and impact on students' satisfaction and clinical learning (Dunn & Burnett 1995). This learning environment consists of two entities which surrounds the student, (a) the clinical entity (i.e., physical structure, clinical human resources, nurse educators and the patients), and (b) the academic (students and nurse educators) (Papp, Markkanen, & von Bonsdorff, 2003).

The literature review by Siggins Miller Consultants (2012) in regard to health professional students' placement learning experiences found that studies demonstrated differences between the students' actual and desired experiences. Undergraduate health discipline students, such as nurses, desired more from their experiences. Quantitative surveys are the major methodological approach used that explored nursing students' real and desired learning experience on clinical placements (Ip & Chan, 2005; Smedley & Morey, 2010; Papathanasiou, Tsaras & Sarafis, 2014). These above quantitative studies lack insight into the questionnaire data.

A Jordanian phenomenological focus group study of second, third and fourth years student nurses ( $n = 30$ ) explored the students' hospital learning experiences (Nabolsi, Zumot, Wardam & Abu-Moghli, 2012). In the findings students described how the experience was not as expected, in a negative way. Features of the negative experiences included feeling unprepared for the practice training, difficulty transferring their classroom knowledge to practice, the power dynamic between nurses and other health professionals, and, short placement rotation periods (Nabolsi et al., 2012). A short placement rotation means students experience problems adjusting and achieving their clinical objectives. The small sample size in the authors' qualitative study, means the findings cannot be generalized to other student nurse populations. Also, the Jordanian sample (Asian descent) is not representative of the student nurse population in Barbados who are primarily of African descent.

An Australian mixed method study of second year student nurses, simultaneously utilising questionnaires ( $n = 108$ ) and qualitative interviews ( $n = 21$ ), explored students' learning experiences in the hospital settings (Chan 2001b). These student nurses also desired more from their experiences (Chan, 2001b). The sampling strategy used by Chan suggests that the findings from his study cannot be directly applied to other nursing cohorts, as they only collected data from a single, second year group of student nurses. Other methodological flaws included random sampling strategy for the qualitative interviews and qualitative themes are identical to the questionnaire subscales which may mean the findings are unreliable. Due to the small sample it is difficult to generalize the qualitative findings to the global student nurse population. Student nurses' views of their assigned hospital placement may not be normally distributed. Each student learning experience varies. Chan's (2001b) use of random sampling may mean that a student who could have given further insight and better understanding to the experiences may have not been included. Therefore, adding students until there is redundancy of concepts emerging during the data collection phase is the best approach for qualitative research. The titles for the qualitative themes and questionnaires subscales in Chan's (2001b) mixed methods study are identical which may suggest the researcher could have overlooked other qualitative categories or themes which further provided insight into the students' experiences. Semi-structured interviews after questionnaire analysis may allow

for further clarification of the major issues demonstrated by the questionnaire analysis.

The clinical learning environment has various factors which impact on student satisfaction and learning. Findings from the literature suggest that the experiences on the actual hospital wards differ, in a negative way, from what student nurses expected.

### **1.5.2 Belonging and feeling accepted**

The findings of the literature suggest student nurses must experience a sense of 'belonging' on the wards in order to have a positive experience (Levett-Jones & Lathlean, 2008; Levett-Jones, Lathlean, Higgins & McMillan, 2009a). Belongingness is a subjective experience, arising from positive interaction with and acceptance from the nursing staff (Levett-Jones & Lathlean 2008). Furthermore, both nursing staff and student nurses must share similar values for 'belonging' to occur (Levett-Jones & Lathlean 2008). A sequential mixed methods study of final year groups of British and Australian students ( $n = 18$  qualitative,  $n = 362$  questionnaire survey) explored the students' experience of belongingness on practice placements (Levett-Jones et al., 2009a; 2009b). In the findings, the British group experienced belongingness more than the Australian group (Levett-Jones et al., 2009b). Additionally, the shorter placement rotation periods and poor staff-student interaction impacted negatively on students' sense of belonging (Levett-Jones et al., 2008; Levett-Jones et al., 2009a). Student nurses who experienced positive staff-student interaction during their stay on the clinical unit for a longer period, experienced a greater sense of belonging.

A Canadian grounded theory study of third and fourth year student nurses ( $n = 18$ ), explored how student nurses actually achieved feelings of belongingness on clinical placements (Kern, Montgomery, Mossey & Bailey, 2014). Three themes emerged: (a) Positioning (preparation for placement and demonstrating readiness for practice), (b) Persevering (students seeking opportunities for learning) and (c) entering the nursing atmosphere (accessing the environment)



(Kern et al., 2014). They concluded that student preparation for practice training and positive staff-student interaction are key features to students' belongingness (Kern et al., 2014). The small sample size and the type of participants means the findings cannot be directly applied to other nursing cohorts as they only collected data from senior student nurses.

Sedgwick, Oosterbroek, and Ponomar (2014) conducted a Canadian sequential mixed method study that explored ethnic minority students' clinical placement experience. The data was collected by questionnaire and individual qualitative interviews. Students believed that the quality of interaction with qualified nurses, clinical instructors and fellow students impacted their sense of belonging (Sedgwick et al., 2014). The sampling strategy used by Sedgwick et al. (2014) means the findings cannot be directly applied to the Barbadian context, as they only collected data from ethnic minority student nurses, such as Black Americans, Aborigines, Latinos, and Asians.

In summary, the findings of the literature suggest student nurses' experiences of belonging are determined by the quality of staff-student interaction and duration of practice placements. The above-mentioned studies have not taken into account other factors contributing to placement learning experience, such as the role of the clinical instructor or ward sister.

### **1.5.3 Clinical supervision**

Clinical supervision is an important component of nursing practice and consequently, of interest to nurse educators. Lewin (2007) compared two separate British studies over a 25 year period; a 7-year longitudinal study (from 1978) and a cross-sectional survey study completed in 2003, both of which explored student nurses' ward experiences. The sample strategies differ between the two studies. Single young British females in three hospital-based nurse training systems participated in the longitudinal study, while the 2003 survey study included females, males and international students in a single higher education setting. Lewin (2007) found positive improvements in the hospital

settings in regard to clinical supervision, qualified nurses' demonstration of clinical skills, and assessment of students' theoretical knowledge. It is possible these changes in the two surveys may have been due to changes in the training system. By 2003, nurse training had moved to colleges and universities (Lewin 2007).

Over the past three decades the type of personnel supporting student nurses in the clinical setting has varied. Initially, the ward sister was the key facilitator of learning in the hospital settings (Fretwell, 1980; Ogier, 1981; Orton, 1981). By the mid-1990s, the registered nurse assumed this role (Savage, 1999; Condell, Elliott & Nolan, 2001; Saarikoski & Leino-Kilpi, 2002; Warne et al., 2010; Skaalvik, Normann & Henriksen, 2011). Depending on the country, the term 'mentor' or 'preceptor' is used to describe the registered nurse as facilitator and assessor of student nurses' learning on placement on a one-to-one basis (Saarikoski, Isoaho, Leino-Kilpi & Warne, 2005; Sand-Jecklin, 2009). Changes in nurse training systems, from hospital-based to colleges or universities, may explain changes in the type of clinical personal support for student's clinical learning (Condell et al. 2001). A Cyprus questionnaire survey of 645 student nurses explored their placement experience in a hospital-based nurse training system (Papastavrou, Lambrinou, Tsangari, Saarikoski & Leino-Kilpi, 2010). Generally, the main facilitator is a qualified nurse who supervised a group of Cyprus students. However, satisfied students experienced more one-to-one supervision (mentorship) (Papastavrou et al. 2010).

An Iranian focus group study of ninety student nurses in three cohorts (second, third and fourth year), explored the students placement learning experience (Sharif and Masoumi, 2005). The findings indicated that student nurses were supervised by both the Ward Sister and the staff nurse. Differences between the Iranian data and the previously-mentioned studies may be due to differences in the nurse training system and cultural differences in professional nursing, which allows for both the Ward Sister and qualified nurses to function as facilitators of the student's practical training.

The clinical instructor's role in students' learning experiences is also of interest to nurse educators. An American questionnaire survey of 2,768 student nurses (sophomore, junior and senior years') explored student nurses' views of their practice learning experiences (Sand-Jecklin 2009). The data were collected by the instrument 'Student Evaluation of Clinical Education Environment' (SECEE) Version 3, a tool which was itself developed by the author. Findings demonstrated that both clinical instructors and qualified nurses (called preceptors) supervised student nurses on the clinical units (Sand-Jecklin, 2009). A Norwegian questionnaire survey of 380 student nurses in three cohorts, explored their views of preceptors' and clinical instructors' supervision (Löfmark, Thorkildsen, Råholm & Natvig, 2012). It was found that the student nurses were more able to meet their clinical objectives with the clinical instructor than the preceptor. Subtle pressure might have influenced students' responses in Löfmark et al.'s (2012) study since nurse educators administered the questionnaires. The use of qualitative data collection methods could have provided further insights into the questionnaire responses.

An Australian qualitative study of 30 final year student nurses explored the students' placement learning experience (Hart & Rotem 1994). An Iranian focus group study of 90 randomly selected student nurses in three cohorts (30 students from each cohort of second, third and fourth year respectively) explored the students learning experience in the clinical settings (Sharif & Masoumi 2005). In the qualitative studies mentioned above, the clinical instructor had no direct supervisory role (Hart & Rotem, 1994; Sharif & Masoumi 2005). Differences between the qualitative studies and the questionnaire surveys might be due to the structure of nurse training system in regard to clinical education. The settings for these qualitative studies included a single-centre school of nursing, which means the findings cannot be directly applied to other schools of nursing. A methodological flaw with Sharif & Masoumi's (2005) study is the use of random sampling strategy for a qualitative study. This could imply that the findings may be unreliable because sampling of the targeted population did not continue until no new concepts arose during the phase of data collection. The researchers presumed that the student nurses had common views about their experiences.

The type of clinical supervision varies across countries (Kaphagawani & Useh, 2013), but mentorship is the most common supervisory approach in clinical nurse training (Saarikoski & Leino-Kilpi 2002, Saarikoski, Leino-Kilpi & Warne, 2002; Warne et al., 2010; Bergjan & Hertel, 2013). It suggests there are subtle similarities in clinical education of student nurses globally. One concern to nurse educators is the findings from the literature regarding the lack of student supervision during the length of their clinical placement (Löfmark & Wikblad, 2001; Saarikoski & Leino-Kilpi, 2002). A Swedish qualitative study of 47 randomly-selected final year student nurses, explored the facilitating and obstructing factors on the placement experiences of the students (Löfmark & Wikblad, 2001). In relation to clinical supervision, findings demonstrated that discontinuity in clinical supervision was one contributing factor responsible for a negative experience (Löfmark & Wikblad, 2001). The shift system could create difficulties for proper student supervision, hence making it less effective (Saarikoski & Leino-Kilpi, 1999). The sampling strategy used by Löfmark & Wikblad (2001) means that the findings from this study cannot be directly applied to other nursing cohorts as they only collected data from single, third year group of student nurses. Another methodological flaw with their study relates to the random sampling of participants which again may indicate that the findings may be unreliable in that the sampling of the targeted population did not continue until no new concepts arose during the phase of data collection. The researchers presumed that the student nurses had common views about their experiences.

The findings from the literature revealed that the type of personal support for student nurses' clinical learning and supervisory methods varies. In addition, the above-mentioned studies suggest the role of the clinical instructor varies in regard to students' clinical learning experiences. Exploring student nurses' views of their clinical supervision and the role of the clinical instructor from a Barbadian context is necessary.

#### **1.5.4 Peer support**

Qualitative studies have shown that fellow students, referred to as 'peers', provide emotional and practical support during clinical experiences (Windsor,

1987; Campbell, Larrivee, Field, Day & Reutter, 1994; Chun-Heung & French, 1997). Windsor (1987) conducted a qualitative study on a sample of 9 senior American nursing students in a university setting that explored students' clinical placement experiences. The student nurses reported a preference for asking their peers questions instead of a staff nurse or clinical instructor (Windsor, 1987). Similarly, other qualitative studies found student nurses felt more supported by peers than the clinical instructors and nursing staff (Chapman & Orb, 2001; Peyrovi, Yadavar-Nikraves, Oskouie & Berterö, 2005).

A Malaysian survey study of 54 registered nurses, 142 student nurses and 8 nurse tutors identified factors promoting and inhibiting student nurses' learning experience in the hospital setting (Chuan & Barnett 2012). In the questionnaire findings peer support is one of the key factors in students' learning experience, but the authors' qualitative component found that hindrance of peer support was missing from the questionnaire element of the survey (Chuan & Barnett 2012). Two features contributed to a negative learning experience for the Malaysian students: (a) competitiveness - student nurses had to compete with their peers to acquire a particular skill experience because of the large student nurse population on the wards; and, (b) perception of roles - staff saw student nurses as part of the workforce due to the acute nursing shortage (Chuan & Barnett 2012). A qualitative approach provides the opportunity for the participants to freely discuss their views of the learning experience on placements compared to being limited to pre-categorized statements. The setting for Chuan & Barnett's (2012) study included a single centre school of nursing which may mean the findings cannot be directly applied to other schools of nursing.

In a qualitative Iranian study by Dadgaran, Parvizy, and Peyrovi (2013), 21 student nurses described the socio-cultural factors affecting their hospital learning experiences. The target population included students from first through final year (fourth year). Student nurses learning experiences varied in response to the classroom factors. Classroom factors related to the type of interaction among peers, the quality of exchange during questions and answers between peers, the size of the student population on the ward, and students' fear of making errors before their peers (Dadgaran et al., 2013). The authors concluded

that the socio-cultural factors of peer support falls at the two ends of the continuum: one is positive peer support which facilitates clinical learning, while the other is negative peer support which in turn, hinders it (Dadgaran et al., 2013). The demographic characteristics of the participants in Dadgaran et al.'s, (2013) study means the findings from this study cannot be directly applied to other student nurse population, as they only collected data from students between the ages 19-25 years and single. First year students assigned to practice training in the second semester did not participate in the study.

In Hart and Rotem's (1994) Australian qualitative study of 30 final year student nurses, the authors identified peer support as one of the key factors to a positive clinical learning experience. Also, students viewed the nursing staff as peers (Hart and Rotem, 1994). Since the students were near the completion of their nurse training, seeing the staff nurses as peers could be important for these future nurses. The findings of the authors' study might be biased because the theme 'Peer Support' is one of the pre-categorized concepts used by the authors in developing the study's overall framework prior to the data analysis. It may suggest the findings are unreliable. The researchers may have overlooked other topics which provide more understanding into the students' learning experiences. The sampling strategy used by Hart and Rotem's study means that the findings from their study cannot be directly applied to other nursing cohorts, given the fact that they only collected data from a single, senior year group of student nurses.

The discussion above has shown that student nurses value the support of their peers and nursing staff. While this promotes learning, some students found competing with fellow students for practical skills experience to be inhibitory.

#### **1.5.5 Opportunities for students' clinical learning**

Learning opportunities refers to the extent to which students are given the opportunity to practice in real clinical situations in order to gain professional competencies (Newton, Billett & Ockerby, 2009). A three year longitudinal mixed methods Australian study of second and third year student nurses explored the

students' workplace learning (Newton et al., 2009). Reporting only on six of the twenty-nine qualitative cases, the authors found students were frustrated because they were given unrelated work by the qualified nurses instead of being given challenging clinical activities. The small sample size in the authors' study means that the findings cannot be directly applied to other student nurse population and are also limited to an Australian context. The chief researcher was also acquainted with some of the student nurses prior to the study (Newton et al., 2009) which may mean the findings are biased towards favourable responses. In Hart and Rotem's (1994) qualitative interview study, students described their experiences as good when they were allowed to participate in clinical activities, and the nursing staff provided learning opportunities for them. Under the previous heading, the limitations of Hart and Rotem's (1994) study were highlighted.

A South African phenomenological study of 11 final year student nurses explored the students learning experiences in the hospital and community settings (Mabuda, Potgieter & Alberts, 2008). Findings from the authors' study suggested the following elements either facilitate or hinder students' opportunity to learn: the length of the placement period, the number of students assigned to a clinical unit at one time, and the frequency with which students are assigned clinical assignments in accordance to their level of competencies and training. Students identified the following issues:

- Student nurses were able to gain more clinical skills experience when assigned to a clinical site for a longer period of time compared to a shorter timeframe,
- In a negative way, a large student nurse population on the assigned clinical unit caused students to compete with each other for skill experiences, and
- Students experienced dissatisfaction when assigned work unrelated to their level of training and competencies. (Mabuda et al., 2008).

During the data collection phase of Mabuda's et al. (2008) study, the researcher bracketed their own experiences from those of the subjects to reduce bias. However, it is not explicitly stated whether the researcher utilised bracketing during the data analysis phase, or whether the researcher's experiences helped to interpret the data. The sample strategy used by Mabuda's et al. (2008) means

that the findings from their study cannot be directly applied to other nursing cohorts as they only collected data from single, final year group of student nurses in one high education setting.

A Greek questionnaire survey of 196 third and fourth year students explored the students learning experiences in practice training. Data collected by the 'Clinical Learning Environment Inventory (CLEI)' tool (Papathanasiou et al., 2014). Henderson et al. (2012) reviewed papers published on the clinical learning experiences of student nurses that utilised the same tool, 'Clinical Learning Environment Inventory (CLEI)' developed by Chan (2003). Both the review (Henderson et al., 2012) and the Greek study (Papathanasiou et al., 2014) suggested that student nurses' involvement may be a determining factor in student satisfaction. Similarities in the findings may indicate subtle similarities in nurse training systems and healthcare systems in developed countries. The data collection tool, survey by questionnaire, may have also biased the findings due to the pre-determined responses. The development of an interview schedule could have provided insight into student involvement, one of the determining factors in student satisfaction.

#### **1.5.6 Theory-practice gap**

A 'theory-practice gap' refers to student nurses being unable to link classroom theory to what is actually practiced by qualified nurses in health care facilities (Kaphagawani & Useh, 2013). A Jordanian phenomenological study of 30 student nurses explored the students practice training experiences. Data were collected by focus groups (Nabolsi et al., 2012). Students attributed the theory-practice gap to the emphasis on technical-based patient care instead of holistic patient care, and conflict between nurse tutors and clinical instructors in regard to students' learning objectives. Nurse tutors focused on the students' clinical learning objectives but clinical instructors focused on performing practical skills (Nabolsi et al., 2012). Therefore, Jordanian student nurses were dissatisfied with their learning experiences because the classroom theory was not directly linked to real case studies.



In Mabuda et al.'s. (2008) phenomenological study of 11 final (fourth) year South African student nurses, the authors also found features contributing to the theory-practice gap in the clinical settings. These were:

- Students were taught the classroom theory after the appropriate clinical placement,
- Nursing staff demonstrated clinical skills differently from what students were taught in the classroom and
- Student nurses seemed as part of the workforce. (Mabuda et al., 2008)

A focus group interview study of 6 Swedish and 16 Finnish first year student nurses explored the students first clinical placement experience (Jonsén, Melender & Hill, 2013). The findings showed that some student nurses' learning experiences were good because of the nexus between classroom and practice. Explanation for the nexus between theory and practice are (1) evidence-based holistic nursing care, and (2) students being encouraged to apply classroom knowledge and literature findings to their practice (Jonsén et al., 2013). Conversely, some students' experiences are negative due to the disconnect between theory and practice because of (1) lack of evidence-based nursing practice; (2) negative attitude of qualified nurses towards nursing research and theory; and, (3) student misunderstanding of classroom information (Jonsén et al., 2013).

Studies utilising a focus group approach could have utilized individual interviews as well to provide further explanations of issues. Both the methodological approach and sample sizes limit the previous mentioned studies' ability to generalise their findings to other nursing student populations. Cultural differences in the studies may impact the finding's applicability to Barbados. The length of South Africa nurse training programme (4 years) is longer than that of Barbados resulting in South African student nurses being exposed to more practical training experiences.

One may anticipate subtle differences in students' learning experiences in cultures that vary from those reported in the literature. Factors such as differences in research design, analyses and subsequent interpretation may impact the studies' findings. Research from a Barbadian context may reinforce, amplify or challenge the findings from the literature review.

### **1.5 Understanding the review in the context of educational learning theories**

Some nurse researchers have applied a non-educational theoretical framework to study student nurses practice placement experience (e.g., Hart & Rotem, 1994; Saarikoski & Leino-Kilpi, 2002; Saarikoski, Isoaho, Warne & Leino-Kilpi, 2008; Koontz, Mallory, Burns & Chapman, 2010). For example, Koontz et al. (2010) applied Benner's (1982) novice-to-expert theory to explore student nurses' views of their clinical placement. A few nurse researchers applied an educational theoretical framework to their studies (Smedley & Morey, 2010; Cope, Cuthbertson & Stoddart, 2000; Sand-Jecklin, 2000; Sand-Jecklin, 2009; Hosoda, 2006). Nevertheless, the research data lacks interpretation from the learning theories applied. However, useful inferences can still be made.

Individual student's views of their clinical learning experiences on placement may be considered a cognitive approach (Genn, 2001). Clinical placement sites are viewed largely as appropriate places (authentic) for student nurses to learn and practice professional nursing (Lave & Wenger, 1991; White, 2010). One of the four factors, 'Connecting with, and learning in, communities of clinical practice', in Watson et al's. (2014) factor analysis study best describes learning in the clinical setting from a social constructivist perspective. Watson et al. (2014) concludes that the clinical learning experiences of student nurses are best interpreted from Egan and Jaye's (2009) theoretical framework of community of practice in a health care setting.

When a student nurse experiences feelings of belonging on practice placement (Levett-Jones & Lathlean, 2008), he or she is moving from a peripheral position to full participation (central position) in the community of practice (Lave & Wenger, 1991). Based on the findings of the literature, student engagement, student involvement and belonging demonstrate the student being allowed to enter into the community of practice in a practice setting (Cope et al., 2000; Chan, 2001b; Smedley & Morey, 2010). Therefore, clinical learning is facilitated based on the presence on the above factors. However, due to the power dynamics demonstrated in a negative staff-student interaction, students may remain on the periphery (Melincavage, 2011). Consequently, social constructivists find fault with any clinical placement setting failing to support student learning (White, 2010).

While both group and individualised supervision allow access into the community of practice, it is achieved more through mentorship (Lave & Wenger, 1991). Mentorship is presumed to provide more learning opportunities and maintains patient-safety (Spouse, 2001; White, 2010). However, the nature of the supervisory relationship determines whether the student has legitimate peripheral participation or not (Spouse, 1998). The key experts on practice placement are qualified nurses as preceptors or mentors, and clinical instructors (Sand-Jecklin, 2009). According to the cognitive apprenticeship approach, the experts facilitate students' application of the thinking skills to clinical situations through engagement (Collins, Brown & Newman, 1989). Cognitive apprenticeship is based on situated learning theory (Collins et al., 1989).

Some studies have indicated that student nurses may turn to their peers when nursing staff were unsupportive (Windsor, 1987; Campbell et al., 1994; Chuan & Barnett, 2012). Constructivist learning theorists view peer learning as a form of cooperative learning (Slavin, 2011) where a novice student nurse learns from a more experienced student nurse. Cooperative learning may fit well within the context of cognitive apprenticeship in that the experienced student nurse is the expert. The findings from the review highlight several cognitive apprenticeship methods used to facilitate student nurse clinical learning. These were role modelling (Savage 1999), feedback (Löfmark & Wikblad, 2001) and reflection

(Hosoda, 2006). Feedback is an example of a coaching method in cognitive apprenticeship (Collins et al., 1989).

From a humanistic perspective, learning in the clinical setting has two goals. The first is for student nurses to attain the level of professional competencies for licensing (Hosoda, 2006). The second is to facilitate student's experiential learning (Hosoda, 2006; Hughes & Quinn, 2013). Humanistic theorists assume that the clinical setting offers a more significant experience for learning professional competency as opposed to the classroom setting (Rogers & Freiberg, 1994).

Hosoda (2006) developed the questionnaire 'Clinical Learning Environment Diagnostic Inventory' (CLEDI) to explore Japanese student nurses' hospital learning experiences. The items in the 'affective' domain of the questionnaire developed by Hosoda (2006) imply staff-student relationships as being significant to clinical learning. Like the social constructivist learning theorists, humanistic theorists also view the quality of staff-student relationship as important to clinical learning (Hughes & Quinn, 2013). Humanistic theorists however are concerned with the feelings and attitudes derived from staff-student relationships (Rogers & Freiberg, 1994; McIntosh, 2011). Therefore, the feelings students experienced on placement, such as belonging, feeling accepted, valued and empowered are the focus of humanistic theorists (McIntosh, 2011; Hughes & Quinn, 2013).

Reflective learning has a role to play in the context of clinical learning. In a Japanese study, student nurses reported that the wards offer opportunities to reflect on practice, termed 'reflective clinical learning environments' (Hosoda, 2006). However, the low rating by student nurses on this factor suggests that student nurses felt it was not very important to their learning and experiences (Hosoda, 2006). This finding challenges the humanistic assumptions of developing from novice to expert through reflective learning as highlighted by Benner (1982). The humanistic theorists assume student nurses may realise their full potential in professional nursing competencies through reflective learning

(Hughes & Quinn, 2013). It is suggested that reflective learning facilitates the linkage of classroom theory into nursing practice more effectively (Kaphagawani & Useh, 2013).

The review implies learning in the clinical setting is best interpreted from a social constructivist learning theorist paradigm with some explanation from a humanistic perspective. It is clear the thinking processes are more considered in the context of social interaction in the community of practice. Nevertheless, nurse educators seem dismissive of the thought processes involved in learning on placement. Based on the findings of the literature, behavioural learning and cognitive learning theories seem to have little relevance when explaining how student nurses learn on clinical placement.

#### **1.6 Summary of the literature in relation to the delivery of nurse training in Barbados and rationale for the research**

Based on the literature review there were four major findings. First, the clinical setting is an important learning environment for student nurses to link classroom knowledge and real practice, and develop their professional nursing identity. Second, a positive staff-student interaction leads to the student nurses' experiencing acceptance, belonging and increased learning opportunities. However, if student nurses are not allowed to engage, the result will be a lack of learning opportunities, student nurses will feel anxious and as though they do not belong in the clinical setting. Consequently, student nurses turn to their peers for support. Third, student learning is best facilitated by frequent mentorship supervision. Finally, student learning may be hampered by the theory-practice gap observed on placement. The thought processes and skill competency of a student nurse occurs through engaging with members in the community of practice. As a result, nurse researchers commonly explain the clinical learning of student nurses in the practice settings from a social constructivist approach. However, student nurses' feelings and experiences are a humanistic approach to clinical learning.

The type of personnel supporting student nurse clinical learning in Barbados is different from those described in the literature. In Barbados, the large student nurse population on clinical placement and the acute nurse shortage at the hospital have pushed the student to supervisor ratio beyond the recommended level. Globally, differences in nurse training of student nurses exist. The literature review indicates that the clinical learning experience of student nurses varies. Similarities of findings in the literature imply that lessons may be learnt and applied to Barbados.

It is important to examine whether the hospital setting in Barbados is meeting the nursing students' learning needs, to determine the success of placements. The student nurse is the primary recipient of learning in practical nurse training and it is therefore important to evaluate the hospital setting from their perspective.

The overall aim of this research is to understand student nurses' clinical placement learning experience at the QEH in Barbados, based on students' current and desired clinical experiences. This information will assist in formulating recommendations to improve the student hospital placement experience. The research objectives are: (1) to examine the student nurses' current learning experiences at the hospital (survey by questionnaire study followed by qualitative interview study), (2) to determine the student nurses' desired experiences at the hospital (using the same two studies) and, (3) to compare and contrast their current clinical experience with their desired experience by integrating the data across the quantitative and qualitative studies.

It was best to explore student nurses' hospital placement experiences using a mixed methods research approach (i.e., quantitative and qualitative). Due to the complexity of the hospital ward setting, quantitative methods tell a partial story. Therefore, a qualitative method is necessary to identify the reasons behind the numerical questionnaire data. Comparing and contrasting the findings from both studies should tell a more complete story of student nurses' hospital placement experience.

## **1.7 Overarching research questions**

The overarching research questions for this thesis are:

1. *What are the student nurses' experiences of their clinical placement at the Queen Elizabeth Hospital?*
2. *To what extent can the student nurses' experiences of their clinical placement be understood in the context of learning theories?*

## **1.8 Chapter summary**

This chapter presented a global and national historical context of nurse training and a literature review on student nurse practice placement experience. The next chapter will present a review of tools available for use in health professional disciplines, specifically for nursing, for measuring the clinical placement in clinical education.

## **Chapter Two: Evaluating outcome measures tools for use to measure the clinical placement from the nursing students' perspectives**

### **2.1 Chapter overview**

The previous chapter introduced the research in terms of providing background information on nurse training globally and locally, and described the learning theories in general. Further, the chapter reviewed the literature on nursing students' clinical learning experiences and how the empirical evidence has been interpreted using learning theories. This chapter focuses on the tools available for use in health professional disciplines, specifically for nursing, to measure the clinical placement in clinical education. Firstly, the chapter defines student-based outcome measures. Second, it describes the validation process used to appraise the tools. Following this, the search process utilised to identify tools is described. Subsequently, the concepts or domains used to assess the clinical placement and the analysis of psychometric properties will be discussed under the appropriate heading for each tool. Finally, a summary of the review findings and rationale for the selection of tools for the research are presented.

### **2.2 Student-based outcome measures**

Student-based outcome measures focus on students' views of their educational setting and how it affects their learning, and are developed using methods such as questionnaires and interviews (Snyder, Valovich McLeod & Sauers, 2007). In the context of this thesis, nursing students' views about, and their satisfaction with their placement at the Queen Elizabeth Hospital need to be ascertained. Student satisfaction is an outcome which assesses the student nurse's level of enjoyment from the practical training placement (Chan, 2002a). It is important to examine whether the health care agencies (such as the hospital), are meeting the nursing students' learning needs to determine the success of the clinical placement in student learning. Since the student nurse is the primary recipient of teaching in clinical nurse education, it is important to evaluate the hospital setting from their perspective. The research findings can assist nurse educators and healthcare administrators in monitoring the hospital setting for nursing students'



placement and improve the quality of the clinical placement. A tool that assesses the nursing student satisfaction is needed. Consequently, it was necessary to examine the literature to see what tools were available, identify the most appropriate tool(s) for the Barbadian student nurse population and for the purpose of the current research. Several tools were identified in the literature and it was thought best to use an existing tool. The next section describes the criteria for appraising the tools for use.

### **2.3 Criteria for appraisal of the tools**

An evaluative checklist was developed which drew on the works of Greenhalgh, Long, Brettell and Grant (1998), DeVon et al. (2007), and Bannigan and Watson (2009). Inspiration for creating a checklist came from an article by Greenhaigh et al. (1998) who believed a checklist was a useful guide in evaluating appropriate tools for use in clinical practice. The checklist should consist of two broad categories: descriptive and evaluative (see Greenhaigh et al., 1998). The articles by Fitzpatrick, Davey, Buxton and Jones (1998), DeVon et al. (2007), and Bannigan and Watson (2009) are excellent papers for novice researchers who wish to have a greater understanding of psychometrics.

The criteria checklist used in this chapter included the following categories: description of the tool, reliability (results are consistent), validity (assess what it is supposed to measure) and utility (practicality) (Bannigan & Watson, 2009, LoBiondo-Wood & Haber, 2014) (see Table 4). The Cronbach's alpha for internal consistency and test-retest correlations for stability are considered acceptable at  $\geq 0.70$  (DeVon et al., 2007), for instance, a tool and its domains with internal consistency and reliability that are greater than 0.70 is good.

Table 4: Checklist for evaluation of instruments

Concepts	Definition	Questions
<b>Validity</b>	<b>The extent to which a tool measures what it claims to measure.</b>	
Content validity	The extent to which the tool is comprehensive when reviewed by an expert panel/compared to the literature/both.	Does the tool cover all important questions on the topic?
Face validity	The extent to which a tool is deemed credible.	Are the items relevant?
Construct validity	The extent to which a hypothesised concept(s) correlates with other similar variables, and/or differentiate between groups.	How well do the items test the same scale/dimension? Does the scale/dimension identify one scale/dimension from another?
Criterion validity	The extent to which the tool correlates with another valid tool.	Is it comparing to another instrument?
<b>Reliability</b>	<b>The extent to which the tool consistently assesses what it is thought to measure.</b>	
Internal consistency	The extent to which a group of items measure the same concept.	Do the items correlate within a sub-dimension and the total tool?
Test-retest reliability	The extent to which the tool would have the consistent results on different occasions using the same subjects.	Are the same results obtained when the tool is repeated?
<b>Utility</b>	<b>The extent to which a tool is practical for use.</b>	What is the length of time to complete the tool? Is the tool easy to administer? Is the language clear? How easy is it to score and interpret? (Hewlett et al. 2007)

Adapted from Fitzpatrick et al. (1998); Bannigan & Watson (2009)

## **2.4 Search strategy**

This section presents the search process for identifying tools to measure the clinical placement from the students' views. Electronic searches in the following databases were performed: MEDLINE, Web of Science, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Dialog DataStar Education Indexes and ProQuest Education Index. The review timeframe was from the inception of each database, to the date of discontinuing the search, which was January 2015. Articles published in English were extracted, because of the lack of resources for translation, and references from the retrieved studies were searched to identify related articles. The search terms used were: scale, questionnaires, inventory, tools, clinical learning environment, instrument, survey, placement, and clinical.

The Matrix Method (Garrard, 2011) was used to evaluate the retrieved papers. The process involved evaluating each paper in ascending chronological order, using a structured abstracting format with nine topics: journal identification, purpose, setting, methodological design, sample/subjects (i.e., sampling design, subject characteristics, number of subjects), data collection methods, instrument characteristics, standardized instruments, and psychometric characteristics of data collection instrument. The next section will present the instruments that are available to measure clinical placement.

## **2.5 Tools used to measure the clinical placement experience in health professional disciplines training**

The last four decades have seen an increase in self-reported tools developed to measure the clinical and classroom settings across different health professional disciplines (Darcy Associates Consulting Services, 2009; Soemantri, Herrera & Riquelme, 2010; Siggins Miller Consultants, 2012). These tools varied in format and focus so that different aspects of the clinical and classroom setting could be evaluated (Soemantri et al., 2010). In addition, the majority of the tools are student-oriented questionnaires drawing on the works of Herbert Walberg (1976,

1979) and Rudolf Moos (1974) classroom learning environment (Darcy Associates Consulting Services, 2009).

A systematic review of 79 peer-reviewed articles across different countries for the period 1958 to 2008 identified 31 tools used to evaluate the educational setting (clinical and classroom) for undergraduate and postgraduate health professional students (Soemantri et al., 2010). The review revealed 4 tools with very good reliability and validity: 'the Dundee Ready Educational Environment Measure (DREEM)' in undergraduate medicine, 'Postgraduate Hospital Educational Environment Measure (PHEEM)' in postgraduate medicine, 'Clinical Learning Environment and Supervision (CLES)' for nursing education, and 'Dental Student Learning Environment Survey (DSLES)' for dental education (Soemantri et al., 2010).

Recently, medical educators have focused on the application of a social constructivist learning theory approach to their questionnaire construction for measuring the clinical placement experience of undergraduate medical students. For example, the 'Manchester Clinical Placement Index' (MCPI) influenced by socio-cultural learning theory (Dornan, Muijtjens, Graham, Scherpbier & Boshuizen, 2012) and the 'Undergraduate Clinical Education Environment Measure' (UCEEM) based on workplace learning theories (Strand et al., 2013).

Researchers have also developed an 'Interprofessional Clinical Placement Learning Environment Inventory' (ICPLEI) tool to assess teamwork and collaboration among health professional students (medicine, nursing, pharmacy and allied health disciplines) in Australian ward settings (Anderson, Cant & Hood, 2014). The ICPLEI questionnaire consists of 26 items, each with four domains, which in turn are rated on a 5-point Likert type scale with two open-ended questions (Anderson et al., 2014). Some questionnaire items and domains, for example the domains 'role clarification' and 'team functioning and collaboration' make the ICPLEI tool limited to research on interprofessional learning.

## **2.6 Tools used to measure the clinical placement experience in nurse training**

Nurse educators have developed audit tools to measure student nurses' clinical placement experiences (Shailer, 1990; Callaghan & McLaffery, 1997). A previous literature review of tools to measure these experiences identified five peer-reviewed tools published between 1994 to 2014 (Hooven, 2014). The emphasis of Hooven's (2014) review was on identifying the common themes the questionnaires measured based on students' opinions. She concluded that the Clinical Learning Environment, Supervision and Nurse Teacher questionnaire encompassed all six themes identified in the review: 'staff-student relationship'; nurse manager involvement; student feeling "included"; atmosphere; and feedback (Hooven, 2014). Although the peer-reviewed reported audit tools and Hooven's review provide descriptive information in relation to areas of focus and development, they lack information concerning reliability and validity of the tools used.

The purposes of this review are (1) to identify student-based tools used to measure the clinical placement experiences of basic level nursing students, and (2) to evaluate the identified tools' psychometric qualities. The search strategy revealed 13 tools in 47 peer-reviewed articles. Appendix A presents a summary of each tool based on these articles. A table checklist tool, adapted from Pudas-Tähkä, Axelin, Aantaa, Lund & Salanterä's (2009) review of assessment tools for unconscious and sedated intensive care patients, is used to provide a visualisation of each student-based tool selected in the review (see Table 5). The table checklist presents the researcher-allocated scores for each reviewed tool based on the information on the tool's practicality in terms of utility and feasibility, validity and reliability from the articles. Each category within the table checklist is scored between 0 and 2, with an overall score at the end (out of 12). The higher the scores the better the overall quality of the tool (Pudas-Tähkä, et al., 2009). The findings from the review will assist in identifying the tool(s) suited to the Barbadian context or if a new tool should be constructed for the research. This section focuses on papers describing selected tools and discusses their psychometric properties of questionnaires.

Table 5: Summary of validation of student-based instruments used to measure the clinical placement experience

Assessment instruments/ Psychometric properties	BS-CPE	CEF	CLEDI	CLEI	CLEI – 19	CLE scale	CLES	CLES+T scale	QCPE	Questionnaire from Lee et al.	Questionnaire from Orton –Modified	SECEE Inventory version 3	Ward learning climate
<b>Utility &amp; Feasibility</b> 2: Instrument is manageable, and includes instructions and scoring interpretation 1: Instrument is manageable 0: Instrument is complex and lengthy	2	2	2	2	2	2	2	2	1	2	2	2	0
<b>Face &amp; content validity</b> 2: Tool review by experts; compared with the literature; the tool seems to cover all important items or subscales; pilot study 1: review by experts; seems to cover moderately important items or subscales 0: Tool does not seem to cover important items or subscales or no information reported about review by experts and compared to literature	1	2	2	2	0	2	2	2	1	1	2	2	2

Assessment instruments/ Psychometric properties	BS-CPE	CEF	CLEDI	CLEI	CLEI – 19	CLE scale	CLES	CLES+T scale	QCPE	Questionnaire from Lee et al.	Questionnaire from Orton – Modified	SECEE Inventory version 3	Ward learning climate
<b><u>Criterion validity</u></b> correlates with domains of other tools 2: correlates high ( $r > 0.60$ ) 1: correlates moderate-acceptable ( $r > 0.45 < 0.60$ ) 0: correlates low ( $r < 0.45$ ), no information	1	0	2	0	0	2	2	0	0	0	0	0	0
<b><u>Construct validity</u></b> 2: Presence of factor analysis, or discriminant validity, or Pearson correlates with other domains in the same tool high ( $r > 0.45$ ) 1: Absence of factor analysis, or discriminant validity, or Pearson correlates low ( $r < 0.45$ ) 0: No information	2	0	2	2	2	2	2	2	2	2	0	2	2
<b><u>Internal consistency</u></b> 2: $\alpha > 0.70$ 1: $\alpha > 0.60$ $\alpha < 0.70$ 0: $\alpha < 0.60$ , or no information	2	2	1	1	2	1	2	2	2	2	1	2	0

Assessment instruments/ Psychometric properties	BS-CPE	CEF	CLEDI	CLEI	CLEI – 19	CLE scale	CLES	CLES+T scale	QCPE	Questionnaire from Lee et al.	Questionnaire from Orton – Modified	SECEE Inventory version 3	Ward learning climate
<b><u>Test-retest reliability</u></b> 2: High reliability coefficient > 0.80 or no statistical significant differences between pre- to post-test scores 1: Moderate –acceptable > 0.70 to < 0.80, or statistical significant differences between pre- to post-test scores 0: Reliability coefficient < 0.70 or, no information	0	0	1	0	0	0	1	0	2	0	0	0	0
<b>Overall judgment (out of 12)</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>11</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>4</b>

**Note:** BS-CPE = Belongingness Scale – Clinical Placement Experience; CEF = Clinical Evaluation Form; CLEDI = Clinical Learning Environment Diagnostic Inventory; CLEI = Clinical Learning Environment Inventory; CLEI – 19 = Abbreviated Clinical Learning Environment Inventory; CLE = Clinical Learning Environment Scale; CLES = Clinical Learning Environment and Supervision; CLES+T = Clinical Learning Environment, Supervision and Nurse Teacher; QCPE = Quality Clinical Placement Evaluation Tool; SECEE = Student Evaluation of Clinical Education and Environment Inventory.

Adapted from Pudas-Tähkä, Axelin, Aantaa, Lund & Salanterä (2009). Every item received points from 0 to 2, with a total range of 0-12 (the higher the score, the better quality the tool). As there is no gold standard to test the criterion validity assessment, the criterion validity was guided by DeVon et al. (2007) article.



### 2.6.1 Belongingness Scale – Clinical Placement Experience (BS-CPE)

**Description:** The BS-CPE is a tool adapted from Somers' 'Belongingness Scale' questionnaire to measure nursing students' feelings of belonging (belongingness) on their clinical placements (Levett-Jones et al., 2009b). See Appendix A for a summary of the tool. BS-CPE includes 34 items which cover 3 domains: 'esteem' (feeling secure, included, valued and respected by nurses and other clinical staff), 'connectedness' (feels included with the clinical staff, especially nurses), and 'efficacy' (the student nurse's professional and personal values are in harmony with those of the clinical staff) (Levett-Jones et al., 2009b).

**Reliability:** *Internal consistency.* Cronbach alphas' for internal consistency on the original scale and subscales were high: BS-CPE 0.92, 'Esteem' subscale 0.9, 'Connectedness' subscale 0.82, and 'Efficacy' subscale 0.8 for 362 student nurses (Levett-Jones et al., 2009b). In a Korean form of the BS-CPE, the overall Cronbach's alpha was 0.90 and subscales ranged from 0.74 to 0.84 ( $n = 335$  senior student nurses) (Kim & Jung, 2012). *Test-retest.* None reported.

**Validity:** *Content validity.* The original form of the BS-CPE is based on a literature review (Levett-Jones et al., 2009b). *Construct validity:* The original factor analysis in belongingness in clinical placement ( $n=362$  student nurses) showed that the 34 items included 3 factors: 'Esteem', 'Connectedness' and 'Efficacy' (Levett-Jones et al., 2009b). A factor analysis study involving a sample of 335 Korean student nurses resulted in the deletion of two items from the BS-CPE instrument, leaving a total of 32 items (Kim & Jung, 2012). The deleted items did not reflect the Korean clinical environment (Kim & Jung, 2012). *Criterion validity.* Kim and Jung (2012) utilised Pearson's correlation to test the relationship between belongingness in clinical placements and self-esteem and self-directed within the same tool. Belongingness during clinical placement correlated moderately with 'self-esteem' ( $r = 0.47$ ,  $p < 0.001$ ) and 'self-directed' ( $r = 0.50$ ,  $p < 0.001$ ) among a sample of 335 Korean student nurses (Kim & Jung, 2012).

**Utility:** BS-CPE was tested and reported by a pilot sample of participants to be easy to read (Levett-Jones et al., 2009b; Kim & Jung, 2012). Time to complete the questionnaire was approximately 10 minutes (Levett-Jones et al., 2009b; Kim & Jung, 2012)

The BS-CPE scored 8 out of 12 for its psychometric properties.

### **2.6.2 Clinical Evaluation Form (CEF)**

**Description:** CEF measures the quality of clinical teaching support undergraduate nursing students' receives in the clinical settings (Porter et al., 2011). The tool was developed by Porter et al. (2011) and includes 21 items grouped into 5 domains: 'orientation' to the clinical placement, the role of the 'clinical educator/teacher', clinical support from 'ward staff', 'clinical assessment/clinical hurdles', and the role of 'university' in providing support on clinical placement. See Appendix A.

**Reliability:** *Internal consistency:* Overall, Cronbrach's alpha for CEF was 0.90; Cronbach alpha's for each domain was good (0.73-0.91). *Test-retest:* Not reported.

**Validity:** *Face and Content validity:* The development of the questionnaire was informed by literature on instruments measuring clinical placement experiences, authors' own University developed tools, panel of experts in clinical nurse education and clinicians, and pilot study on a cohort of first and second year Australian student nurses ( $n = 6$ ) (Porter et al., 2011). *Construct validity:* Not reported. *Criterion validity:* Not reported.

**Utility:** Time to complete was approximately 10 minutes.

The CEF scored 6 out of 12 for its psychometric properties.

### 2.6.3 Clinical Learning Environment Diagnostic Inventory (CLEDI)

**Description:** The CLEDI was developed to measure the views of Japanese baccalaureate nursing students at three educational institutions with respect to their clinical placements (Hosoda, 2006). See Appendix A for a summary of the CLEDI tool. The CLEDI development was influenced by a literature review and a conceptual framework based on cognitive and socio-emotional approaches to learning. The CLEDI includes 21 items and covers five domains of the clinical learning environment (CLE): 'Affective CLE', 'Perceptual CLE', 'Symbolic CLE', 'Behavioural CLE', and 'Reflective CLE' (See Hosoda, 2006). Several of the statements in the CLEDI are too broad (e.g., efforts to enhance the quality of health care).

**Reliability:** *Internal consistency:* Cronbach's alpha reliability was marginal to high across the domains. However, the overall internal consistency for the instrument was high. *Test-retest:* Ranged from poor through to high for the domains between 3 week periods, there was strong statistical significance among the domains (Hosoda, 2006).

**Validity:** *Content validity:* Items were derived from literature review, qualitative interviews with student nurses and preceptors, and then refined after a pilot study (Hosoda, 2006). *Construct validity:* Factor analysis supported the five predetermined domains. For 312 junior and senior student nurses in a university setting, the CLEDI correlated positively with similar measures on a different tool known as Fry's (1981) 'Learning Environment Diagnostic' tool ( $r = 0.55, p < 0.01$ ) (Hosoda, 2006). Furthermore, there was a moderate to low correlation between the two tools in the areas of 'affective', 'perceptual' and 'behavioural' ( $r = 0.33-0.46, p < 0.01$ ) in the student nurses sample, but not in the domain 'symbolic'. No statistical association was noted between the measures of CLEDI and another tool 'Perceived Adaptive Status to Nursing Practice' by Yoshinaga et al. (1989, cited by Hosoda, 2006, p.484) to determine discriminant validity of the CLEDI

(Hosoda, 2006). *Criterion validity*: To assess criterion-related validity of the CLEDI tool, the Clinical Learning Environment and Supervision evaluation scale (CLES) developed by Saarikoski and Leino-Kilpi (2002) was used. The CLEDI had a strong relationship with the CLES ( $r = 0.76$ ,  $p < 0.01$ ) (Hosoda, 2006). Several of the CLEDI domains revealed good association with the CLES instrument among the 312 junior and senior student nurses sample ( $r = 0.39 - 0.74$ ,  $p < 0.01$ ) (Hosoda, 2006). While the behavioural aspect of the clinical environment had poor association, overall the relationship between the CLEDI and CLES was statistically significant.

**Utility:** No response burden was reported. It is a short instrument. A useful research tool in identifying the student nurses' clinical placement experience.

The CLEDI scored 10 out of 12 for its psychometric properties.

#### **2.6.4 Clinical Learning Environment Inventory (CLEI)**

**Description:** Chan (2001a; 2002b; 2003) adapted the College and University Classroom Environment Inventory (CUCEI) (Fraser et al., 1986, cited by Chan 2003, p.523) to assess student nurses' views of their clinical placement in a hospital setting. See Appendix A for a summary of the CLEI tool. Person-Environment Fit' theories (Chan 2003), and Moos' (1974, cited by Chan 2002b, p.72) theory of human environment are the conceptual frameworks underpinning the tool development. The CLEI consists of 42 items that fall into six domains: personalisation, individualisation, innovation, involvement, task orientation, and satisfaction (see Chan, 2003).

The CLEI consists of two forms, the first measures students' real clinical experiences on placement (the actual form) and the second measures the ideal clinical experience (the preferred form) (Chan, 2001a; 2002b; 2003). The CLEI underwent minor wording changes in some studies (Henderson, Twentyman, Heel & Lloyd, 2006; Perli & Brugnolo, 2009). Some researchers also changed the

method of scoring or omitted invalid responses excluded in the analysis (Henderson et al., 2006; Smedley & Morey, 2010; Berntsen & Bjørk, 2010). The instrument excludes the influence of the nurse tutor on the student's clinical learning. A possible reason for this might be that the instrument's sole purpose was to measure the psychosocial elements of the hospital ward setting.

**Reliability:** *Internal consistency:* Cronbach's alpha was used to measure the internal consistency in most studies, except for Smedley and Morey (2010) which reported no reliability and validity data. The original instrument demonstrated an internal consistency of 0.73-0.84 (actual CLEI) and 0.66-0.80 (preferred CLEI) (Chan, 2003), which is fair to acceptable internal consistency. The Cronbach's alpha for the CLEI across different studies and countries ranged between 0.41-0.92 (actual CELI) and 0.48-0.80 (preferred CLEI). Therefore, the internal consistency across different cultural contexts and countries were from unacceptable to high. When Perli and Brugnolli (2009) analysed the internal consistency based on year of study, some domains had higher values, thus the  $\alpha$  - Cronbach value among all the domains ranged between 0.63 and 0.76. It would seem that not all of the items under a particular domain were homogeneous, that is, not all the items correlated under a particular domain (Fitzpatrick et al., 1998). The differences in internal consistency may be explained as resulting from different sample populations and time issues. Data collection for the studies was performed at the end of the clinical placement. Unlike the other studies, Chan (2003) included internal consistency for the scale 'student satisfaction'. *Test-retest:* No data were reported in any of the studies.

**Validity:** *Face and content validity:* The original tool has good face and content validity. Items were derived from the literature on classroom and clinical learning environment research, a modified classroom environment tool for postsecondary education and a panel of experts. *Construct validity:* the original tool showed good construct validity (actual CLEI 0.39-0.47, preferred CLEI 0.23-0.42) (Chan, 2003). In addition, student satisfaction correlated with the other domains in the actual clinical placement ( $r = 0.62 - 0.50$ ,  $p < 0.01$ ) in Chan's (2002a) study. Papathanasiou's et al. (2014) study also demonstrated a correlation between student satisfaction and the other domains of the Actual CLEI ( $r = 0.18$ ,  $p = 0.014$

to  $r = 0.60$ ,  $p = 0.000$ ). Newton, Jolly, Ockerby and Cross (2010) conducted factor analysis on the actual CLEI ( $n = 513$  student nurses) which showed 40 items grouped into 6 categories using the actual CLEI: 'student-centredness', 'affordances and engagement', 'individualization', 'fostering workplace learning', 'valuing nurses' work', and 'innovative and adaptive workplace culture'. No *Criterion validity* was reported in the studies.

**Utility:** The CLEI is a lengthy instrument due to the number of items and in having 'actual' and 'preferred' clinical experience versions of the tool. It takes between 15-20 minutes for completion of both forms of the questionnaire.

The CLEI scored 7 out of 12 for its psychometric properties. The main reasons for a low score were a lack of criterion validity and test-retest reliability, and poor internal consistency in some domains. However, domains broadly covered aspects of the psychosocial context of the ward environment during students' clinical placement.

### **2.6.5 Abbreviated Clinical Learning Environment Inventory – 19 (CLEI-19)**

**Description:** Salamonson et al. (2011) modified the CLEI tool which was created by Chan (2003). The purpose of the questionnaire is to measure nursing students' satisfaction with their clinical placement experience (Salamonson et al., 2011) See Appendix A. The CLEI-19 is a 19-item questionnaire grouped into two domains: 'Clinical Facilitator Support of Learning' and 'Satisfaction with Clinical Placement'. Scoring was the same as Chan's (2003) original tool.

**Reliability:** *Internal consistency.* The total CLEI-19 score Cronbach's alpha was 0.93; Cronbach's alpha for subscales ranged from 0.92-0.94 ( $n = 231$  nursing students) (Salamonson et al. 2011). *Test-retest.* Not reported.

**Validity:** *Content validity:* Not reported. *Construct validity:* Factor analysis identified 2 factors: 'Clinical Facilitator Support of Learning' and 'Satisfaction with Clinical Placement' (Salamonson et al., 2011). Student nurses engaging in health-related paid work had a positive clinical experience on the 'Clinical Facilitator Support of Learning' subscale ( $p = 0.037$ ); while student nurses working more than 16 hours a week, or allocated the afternoon shift during their clinical placement, had a more negative clinical experience on the 'Satisfaction with Clinical Placement' subscale ( $p = 0.038$ ,  $p = 0.007$ , respectively) (Salamonson et al., 2011). No *criterion validity* was reported.

**Utility:** Administration or response burden was not reported but this may not be significant because of the limited questionnaire items.

The CLEI scored 7 out of 12 for its psychometric properties.

## **2.6.6 Clinical Learning Environment Scale (CLE scale)**

**Description:** The tool was developed based on Orton's (1981) 'ward learning climate' 124 item-questionnaire (Dunn & Burnett, 1995). The CLE tool includes 23 items which focus on the clinical setting, the roles of clinical staff and ward manager on student nurses' learning (See Appendix A). The tool covers five domains: 'staff-student relationships', 'nurse manager commitment', 'patient relationship', 'interpersonal relationships', and 'student satisfaction' (Dunn & Burnett, 1995). The sub-dimension 'interpersonal relationship' was changed to 'hierarchy and ritual' in Dunn and Hansford's (1997) study. However, the items remained the same as in the original tool by Dunn and Burnett (1995). No explanation was offered for the change in title. Some of the questionnaire items were vague, for example whether the placement site was "too ritual", "a happy" and "a good" clinical environment for learning (Sand-Jecklin, 2009).

**Reliability:** *Internal consistency:* Cronbach's alpha ranged from poor through to high across studies among the domains (0.53-0.90) (Dunn & Burnett, 1995;

Saarikoski et al., 2005). Dunn and Hansford's (1997) study reported no reliability. *Test-retest*: Not reported.

**Validity:** *Face validity*: Items were generated by expert nursing educators based on Orton's (1981) 'ward learning climate' tool and led to 55 items (Dunn & Burnett, 1995). *Content validity*: The pilot study resulted in 23 items (Dunn & Burnett, 1995). *Construct validity*: Factor analysis revealed five domains ( $n=416$ ) (Dunn & Burnett, 1995). In a Finnish study the arrangement of the factors was different from the original study when factor analysis was performed (See Saarikoski et al., 2005). The domain 'Nurse Manager (NM) commitment' moderately correlated with the domains 'staff-student relationships' ( $r = 0.64$ ,  $p = 0.001$ ), 'patient relationships' ( $r = 0.42$ ,  $p = 0.001$ ) and 'student satisfaction' ( $r = 0.48$ ,  $p = 0.001$ ) (Dunn & Hansford, 1997). Student satisfaction correlated with the other domains of CLE instrument, but the highest association was with staff-student relationships ( $r = 0.71$ ,  $p = 0.001$ ) (Dunn & Hansford, 1997). *Criterion validity*: Canonical correlation analysis demonstrated a very strong correlation existed between the CLE scale and the tool 'Clinical Learning Environment Supervision' (CLES) ( $R_c = 0.93$ ,  $p = 0.000$ ,  $n = 416$ ) (Saarikoski et al., 2005). The strongest correlations between the two instruments were among the following domains: 'premises of learning on the ward' and 'student satisfaction'; 'supervisory relationship' and 'staff-student relationships'; and 'premises of nursing care on the ward' and 'patient relationship' (Saarikoski et al., 2005).

**Utility:** The instrument was short. No response burden was reported. The CLE scale scored 9 out of 12 for its psychometric properties.

### 2.6.7 Clinical Learning Environment and Supervision (CLES)

**Description:** The purpose of the tool is to measure the clinical learning environment and supervisory relationship with staff nurses, from the student nurse's perception (Saarikoski & Leino-Kilpi, 2002). The tool consists of 27 items grouped into 5 domains: 'ward atmosphere', leadership style of the ward manager', 'premises of nursing care', 'premises of learning', and 'supervisory



relationship' (Saarikoski and Leino-Kilpi 2002). The instrument was translated and modified into a Dutch version known as the CLES + NL (De Witte, Labeau & De Keyzer, 2011). Although the scoring of the CLES +NL is the same as the original instrument, the CLES + NL questionnaire is a 32 item version instead of the original 27 item version. The five additional questionnaire items in the CLES +NL questionnaire measured the following areas:

- Quality of patient care by nursing staff;
- Student stimulation during clinical supervision;
- Learning opportunities;
- Student equality in the nursing team; and
- Recommending the ward to peers

(De Witte et al., 2011)

See Appendix A for the CLES and CLES +NL tools.

**Reliability:** *Internal consistency.* Cronbach's alpha for the CLES subscales across studies had a moderate to high internal consistency, ranging between 0.73-0.95, while the total instrument had a range of 0.86-0.95 (see Appendix A). Overall Cronbach's alpha for the CLES +NL tool was 0.970, and the domains ranged between 0.859 and 0.956, which were higher than the CLES. In 38 student nurses, *test-retest reliability* was 0.71-0.91 over a four-week period (Saarikoski, 1998, cited by Saarikoski et al., 2005, p.5).

**Validity:** *Content validity* and *face validity* were good among the CLES and CLES + NL (Saarikoski & Leino-Kilpi 2002; De Witte et al., 2011) (see Appendix A). *Construct validity.* Factor analysis on the CLES supported the five domains developed, and CLES + NL demonstrated the same five domains as the original questionnaire (Saarikoski & Leino-Kilpi, 2002; Saarikoski et al., 2005; Papastavrou et al., 2010; De Witte et al., 2011). In the CLES tool ( $n = 416$  student nurses), the domain 'ward atmosphere' correlated with 3 domains: 'premises of nursing care' ( $r = 0.50$ ), 'premises of learning' ( $r = 0.71$ ), and 'supervisory relationship' ( $r = 0.66$ ) at  $p = 0.05$  but no statistical association with 'leadership style of the ward manager' ( $r = 0.36$ ) (Saarikoski & Leino-Kilpi, 2002).

Furthermore, there was a strong correlation between 'premises of learning' and 'supervisory relationship' ( $r = 0.68$ ,  $p = 0.05$ ) (Saarikoski & Leino-Kilpi, 2002). These findings differ to the Pearson correlation coefficients findings of the Cypriot sample ( $n = 645$ ) in Papastavrou et al. (2010) study (ranging from  $r = 0.632 - 0.477$ ,  $p = 0.01$ ). The Cypriot sample demonstrated a stronger statistical correlation between all the domains in the CLES than did the Finnish sample.

*Criterion validity:* The CLES tool had a strong correlation with Dunn's and Burnett's (1995) tool, the 'Clinical Learning Environment' (CLE) scale ( $n = 416$ ) at  $0.93$  ( $p = 0.000$ ) (Saarikoski et al., 2005). The highest correlations were found among the following domains of the tools at  $p = 0.001$ : 'premises of learning on the ward' (CLES) and 'student satisfaction' (CLE) ( $0.72$ ); 'supervisory relationship' (CLES) and 'staff-student relationships' (CLE) ( $0.67$ ); and, 'premises of nursing on the ward' (CLES) and 'patient relationship' (CLE) ( $0.65$ ) (Saarikoski et al., 2005).

**Utility:** No evidence of response burden was reported. The items appear easy to interpret.

The CLES scored 11 out of 12 for its psychometric properties.

#### **2.6.8 Clinical Learning Environment, Supervision and Nurse Teacher Evaluation Scale (CLES+T)**

**Description:** The CLES + T measures the clinical placements, focusing on the clinical learning environment (i.e., ward atmosphere, leadership style of the ward manager, and nursing care), supervision by qualified nurses and role of the nurse tutors, on student nurses' clinical learning (Saarikoski et al., 2008). The CLES + T tool (Saarikoski et al., 2008) is a modified form of the CLES tool (Saarikoski & Leino-Kilpi, 2002). The questionnaire consists of 34 items that fall into 5 domains: 'pedagogical atmosphere on the ward'; 'leadership style of the ward manager';

'premises of nursing on the ward'; 'supervisory relationship'; and, 'role of nurse teacher'. The tool has been tested in different contexts and countries (see Appendix A). Some studies have incorporated another domain outside of the CLES +T to measure 'students' total satisfaction' on clinical placement using the same response scoring (Saarikoski, Warne, Kaila & Leino-Kilpi, 2009; Johansson et al., 2010; Warne et al., 2010; Sundler et al., 2014). A German study replaced the domain 'role of the nurse teacher' with a question based on the assumption that student nurses might not be able to assess this particular domain (Bergjan & Hertel, 2013).

**Reliability:** *Internal consistency.* Across studies Cronbach's alpha coefficient varied between moderate to high (0.70-0.97) for the five domains of CLES+T tool (see Appendix A). Studies conducted on Swedish student nurse populations reported similar total Cronbach's alpha coefficients for the CLES+T (0.95) (Johansson et al., 2010; Carlson & Idvall, 2014; Sundler et al., 2014). Students' total satisfaction Cronbach's alpha coefficient ranged between moderate to high internal consistency (0.79-0.87) (Johansson et al., 2010; Warne et al., 2010). No *test-retest reliability* was reported.

**Validity:** The original instrument developed by Saarikoski et al. (2008) reported the *content validity solely*. However, *face validity* and *content validity* were reported in other studies using the CLES+T as a result of translating the questionnaire into the language of the country where the instrument would be used (Johansson et al., 2010; Warne et al., 2010; Bergjan & Hertel, 2013; Vizcaya-Moreno, Pérez-Cañaveras, De Juan & Saarikoski, 2015). After translation, a pilot study was conducted on a sample of students in the health disciplines ( $n = 14$ ) in a university, prior to administering the final questionnaire to student nurses (Skaalvik et al., 2011). Thus, the CLES + T instrument had good *face* and *content validity*.

*Construct validity.* The original CLES+T revealed five domains as indicated previously by factor analysis (Saarikoski et al., 2008). In a study by Skaalvik et al.

(2011) the domain 'nursing care on the ward' was renamed 'premises of nursing care and learning situations on the ward' because some items from the domain 'pedagogical atmosphere' loaded on the domain 'nursing care on the ward'. 'Supervisory relationship' had a strong positive correlation with 'pedagogical atmosphere' and the 'premises of nursing' (Bos, Alinaghizadeh, Saarikoski & Kaila, 2012). However, there was a moderate positive association between 'supervisory relationship' and 'leadership style', and a poor positive correlation between 'supervisory relationship' and 'the role of the nurse teacher' (Bos et al., 2012). In a Swedish study (Johansson et al., 2010) and Norwegian study (Henriksen, Normann & Skaalvik, 2012) some items loaded on different factors compared with the original CLES+T). This may be due to the translation process or the items may not be relevant to the country's nursing educational context (Johansson et al., 2010).

In the study by Johansson et al. (2010), none of the items in the factor 'premises of nursing on the ward' could be separated from the factor 'pedagogical atmosphere on the ward' and it was suggested that these two domains be merged and known as 'The pedagogical and caring atmosphere on the ward' (Johansson et al., 2010). Bergjan and Hertel (2013) excluded the domain 'role of the nurse teacher' from their study. Factor analysis showed 5 domains but the new domain was not named and its items were included in the domain 'pedagogical atmosphere on the ward' on reporting. *Criterion validity*: Not reported in any of the studies.

**Utility:** No evidence of response burden was reported. The items appeared easy to interpret.

The CLES+T scored 8 out of 12 for its psychometric properties.

### 2.6.9 Quality Clinical Placement Evaluation Tool (QCPE)

**Description:** The purpose of the QCPE tool, previously known as the 'Quality Clinical Placement Inventory' (Courtney-Pratt, Fitzgerald, Ford, Johnson & Wills, 2014), was to measure the quality of the clinical placement from the perspectives of both the supervising ward nurse and student nurses (Courtney-Pratt et al., 2014). The tool was first published in Courtney-Pratt, Fitzgerald, Ford, Marsden and Marlow (2012), but the psychometric evaluation was published in 2013 (Courtney-Pratt et al., 2014). The development of the QCPE tool was based on the works of Robinson and Di Cocco (2002, cited by Courtney-Pratt et al., 2014, p.506) and Robinson et al. (2007, cited by Courtney-Pratt et al., 2014, p. 506) to simultaneously survey the views of both preceptors and student nurses using similar forms of the tool for each group. Therefore, there are 21 items for the student form of the tool and 17 items for the registered nurses' form. There were no reported domains specifically to be covered by the QCPE prior to testing. (See Appendix A).

**Reliability:** *Internal consistency:* For QCPE, overall Cronbach's alpha was 0.955 for student nurses (n = 48) and 0.927 for nurses (n = 47) (Courtney-Pratt et al., 2014). *Test-retest:* The Australian study (n = 42 student nurses, n = 45 nurses), 5 – 7 days test-retest reliability of the QCPE showed no significant differences in mean scores for student nurses, compared to nurses survey which showed significant differences in 2 items using the paired sample *t*-test (Courtney-Pratt et al., 2014).

**Validity:** *Face and content validity:* Tool's items were evaluated by four experts with responsibilities for clinical placement and its environment, leading to 17 items for supervising nurses and 21 items for student nurses (Courtney-Pratt et al., 2014). *Construct validity:* Student nurses responses revealed three themes on the quality of the clinical placement experiences as shown by factor analysis: 'supervising nurse support during placement', 'clinical facilitator support during placement' and 'welcoming and acceptance' (Courtney-Pratt et al., 2014). *Criterion validity:* Not reported.

**Utility:** Response burden was not reported.

The QCPE scored 8 out of 12 for its psychometric properties.

#### **2.6.10 Questionnaire from Lee et al.**

**Description:** The purpose of the tool was to measure clinical practice satisfaction among a sample of junior and senior undergraduate nursing students at universities in South Korea and USA (Lee, White & Hong, 2009) (See Appendix A). The tool consists of 52 items which includes personal student characteristics, nursing-related items and 30 items specifically measuring the domain 'clinical practice satisfaction'. The domain 'clinical practice satisfaction' covers 5 sub-scales: 'content', 'teaching methods', 'environment', 'schedule', and 'evaluation'.

**Reliability:** *Internal consistency:* Lee et al. (2009) reported on the 'clinical practice satisfaction' domain (30 items) reliability only. Cronbrach's alpha values for the 'clinical practice satisfaction' domain ranged between 0.761 - 0.857 in a sample of South Korean ( $n = 131$ ) and United States of America ( $n = 109$ ) student nurses (Lee et al., 2009). *Test-retest:* Not reported.

**Validity:** *Face validity:* The questionnaire was translated into the English language from Korean by nurse researchers wanting to assess the American nursing students' satisfaction with clinical placement. *Content validity:* Not reported. *Construct validity:* Not reported. *Criterion validity* not reported.

**Utility:** Response burden was approximately 15 minutes for the questionnaire.

The tool scored 7 out of 12 for its psychometric properties.

### 2.6.11 Questionnaire from Orton – Modified

**Description:** The instrument was used to measure the ward environment from certificate and degree student nurses' perceptions in Hong Kong. Yung (1997) modified Orton's (1981) questionnaire into 32 items with 4 domains which are 'Communication lines approachability'; 'task/patient orientation'; 'involvement in teaching' and 'attitude to students' (see Appendix A).

**Reliability:** *Internal consistency:* Cronbach's alpha revealed a poor to moderate internal consistency among the four domains (Yung, 1997). *Test-retest:* Not reported.

**Validity:** *Content validity:* Two nurse experts and a pilot study among 40 student nurses (Yung, 1997). *Construct validity:* not reported. *Criterion validity:* prediction of ethical decision-making was demonstrated by the subscale 'communication lines approachability' in the bachelor's degree sample of student nurses.

**Utility:** This modified Orton's (1981) questionnaire by Yung (1997) is a short tool. No response burden was reported. The actual items within the instrument were not reported.

The tool scored 5 out of 12 for its psychometric properties.

### 2.6.12 Student Evaluation of Clinical Education and Environment (SECEE) Inventory

**Description:** The tool was developed to measure the clinical learning environment on student nurses' learning and was influenced by cognitive apprenticeship learning theory (Sand-Jecklin, 2000; 2009). There is a third version of the scale, known as SECEE Version 3 (Sand-Jecklin, 2009) (See Appendix A). Version 3 measures the context of learning regarding the clinical

tutor, nursing staff, and learning opportunities in the clinical setting from the student perspective (Sand-Jecklin, 2009).

**Reliability:** *Internal consistency:* SECEE Version 3 Cronbach's alpha was 0.94 for the tool overall (Sand-Jecklin, 2009), compared to Version 2 which was 0.89 – 0.94 across the 3 universities in the USA. The 3 domains' alphas were 0.82-0.94 (Sand-Jecklin, 2009). *Test-retest:* Not performed on Version 3. Test-retest correlation was found to be poor in SECEE Version 2, 0.50-0.61 when student nurses evaluated the same placement site (n=46) and much lower when student nurses evaluated different placement areas 0.01 – 0.20 (n = 60) (Sand-Jecklin, 2000).

**Validity:** *Content validity:* Versions of the tool were based on literature review, empirical studies, and course evaluations (Sand-Jecklin, 2000; 2009). *Construct validity:* Not reported on version 2 of the instrument. Factor analysis was performed on SECEE Version 3 which supported the predetermined domains and their relevant items with the exception of two negatively worded items (Sand-Jecklin, 2009).

**Utility:** No response burden was reported in SECEE Version 2. However, students completed SECEE Version 3 questionnaire in approximately 10 minutes (Sand-Jecklin, 2009). The instrument is short in length.

The SECEE scored 8 out of 12 for its psychometric properties.



### 2.6.13 Ward Learning Climate

**Description:** The instrument, Ward Learning Climate, was developed by Orton (1981) and influenced by organisational psychology (Orton, 1981). The tool includes 124 items which cover various issues relating to the clinical placement, students' views of the nursing profession, learning and organizational issues and 2 open-ended questions (Orton, 1981). Factor analysis suggested a two-factor structure: 'ward sister recognition of student nurse needs' and 'the ward sister's commitment to teaching'. See Appendix A for summary of tool.

**Reliability:** No *Internal consistency* and *test-retest* were reported.

**Validity:** No *face validity* was reported. *Content validity* based on literature review and empirical interviews with various stakeholders (nursing administrators, student nurses, ward sisters and nurse educators) (Orton, 1981). *Construct validity:* Factor analysis revealed two major themes of the ward learning environment as indicated previously. Furthermore, two themes were revealed from the correlation analysis: 'student nurses satisfaction with ward experience' and 'student nurses satisfaction with the ward sister's teaching role' (Orton, 1981).

**Utility:** The instrument is lengthy. No response burden was reported. The language was clear.

The 'Ward Learning Climate' tool scored 4 out of 12 for its psychometric properties.

## **2.7 Summary of findings and rationale for tools selection**

The purpose of this review was to (1) identify student-based tools used to measure the clinical placement experiences of basic level nursing students, and (2) evaluate their psychometric qualities. The literature shows that several tools have been developed. One limitation in analysing the psychometric qualities of the tools is its subjectivity. The psychometric analysis of this review is a representation of the current author's opinion. Based on the psychometric properties scores, the CLES is the most reliable and valid tool for measuring how nursing students perceive their clinical placement. Orton's 'Ward Learning Climate' tool (Orton, 1981) and its modified form by Yung (1997) showed poor reliability and validity. Based on the review of the literature the CLEI and CLES+T are the most widely used tools. Two researchers utilised learning theories to inform the development of their instruments to evaluate the learning experience (Sand-Jecklin, 2000; Hosoda, 2006). The various domains being measured on clinical placement demonstrate the complexity of the clinical setting as a teaching-learning environment for nursing student's clinical learning.

Although the CLES was the most reliable and valid tool identified in the literature, the CLES+T was chosen for this research project because the CLES lacks the capacity to measure the impact of the nurse tutor in the students' clinical experience. The CLES+T questionnaire is a further development of the CLES version. In Barbados, the clinical instructors from the college and clinical staff nurses are facilitators of nursing student learning on clinical placement. Based on the literature, the clinical staff nurse, as a preceptor or mentor (Hughes & Quinn, 2013), is a major support of student nurses learning during clinical placement (Warne et al., 2010; Sundler, 2014). In Barbados, no mentor or preceptor format of clinical supervision exists in nursing education, although it has been recommended (The Nursing Council of Barbados, 2008; Ministry of Education and Human Resource Development, 2009). Therefore, measuring the clinical supervision of student nurses by both qualified nurses and clinical instructors will also be an asset to inform nursing educators and health care administrators at the hospital, concerning student nurses' clinical placement experience.

The multidimensional nature of the hospital learning environment on student nurse learning suggests no single tool was able to adequately capture the essence of the students' clinical placement experience on the hospital clinical wards and units. Therefore, the CLEI was also chosen for the quantitative aspect of the current research. The CLEI allows for comparison of the nursing students actual and preferred hospital learning environment. In addition, it allows for further exploration of the issues within the learning environment that may not be fully covered by the CLES + T, such as 'student involvement', 'teaching innovation' and task accomplishment (task orientation). The CLEI and CLES+T measure the quality of interaction between student nurses and clinical staff nurses as was seen in some of their domains (Chan, 2002b; Saarikoski et al., 2008). Interaction and relationship between the qualified nurses and student nurses in the clinical setting were identified in the previous chapter as an important aspect contributing to student learning. Furthermore, there is a lack of reliable and valid tools to measure the clinical placement experiences of student nurses in Barbados. The CLEI and CLES+T questionnaire tools have been used in different contexts and countries, but not in Barbados.

The use of quantitative tools allows for measurement of the students' clinical placement experience. However, numerical data from the quantitative survey would not indicate the reason behind the data, in order to tell the whole story. Therefore, a qualitative study was important to follow the questionnaire survey study to further understand the students' learning experiences in the hospital setting. The qualitative method will be described in chapter five.

## **2.8 Chapter summary**

This chapter provides a review of the research tools available to measure student nurses' clinical placement experience. Numerous instruments were identified that measure the clinical placement in health professional disciplines. Specifically, a review was conducted on the psychometric evaluation of student-based instruments for those tools used in basic level clinical nurse education. The CLES was found to be the most valid and reliable tool for measuring the clinical placement experiences of student nurses. However, the CLES +T and CLEI were

thought to be more suitable tools for use in Barbados. The domains being measured on the questionnaires illustrate the complexity of the hospital learning environment. The next chapter will provide a discussion of the methodology underpinning the present research.

## **Chapter Three: Methodology**

### **3.1 Chapter overview**

The preceding chapter reviewed student-based outcome measure questionnaires, developed to evaluate the clinical placement environment for nursing education. Although other tools were found to be more reliable and valid, the measures within the Clinical Learning Environment Inventory (CLEI) (Chan, 2003) and Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale (Saarikoski et al., 2008) were considered best suited for this research project. The tools would evaluate the students' current and desired clinical learning experience in the hospital setting, the clinical supervision of student nurses, and the role of the clinical instructor. While the quantitative study determines levels and relationships among the variables of the nursing students' hospital learning experiences, it does not capture 'why' and 'how' these issues arise (Dures, Rumsey, Morris & Gleeson, 2011). Therefore, qualitative data will then be collected in order to explain and build upon the questionnaire results (Creswell & Plano Clarke, 2011). Consequently, a mixed methods approach will be used for the research in order to obtain a comprehensive understanding of the nursing students' experiences in the QEH placement.

This chapter is a general overview of the theory which informs the selected research design, rather than a detailed description of the population, recruitment, ethics, data collection and analysis of the studies. The specific research methods used in the quantitative and qualitative studies will be presented in detail in their separate methods chapters (chapters four and five, respectively). Instead, this chapter discusses the methodological assumptions employed to measure and explain nursing students' learning experience at the QEH. Firstly, it outlines the overarching research aim, objectives and research questions. Secondly, mixed methods research approach as a methodology and its application to the current research thesis are discussed. The chapter next addresses the rationale for the order of the studies. It explains how a pragmatic position informs the current research thesis. Finally, an outline of ethics approval is detailed.

### **3.2 Research aim and objectives**

The overall aim of this research is to understand student nurses' clinical placement learning experience at the Queen Elizabeth Hospital in Barbados, based on their current and desired clinical experiences. This information would assist in formulating recommendations to improve the students' hospital placement experience.

The objectives of the research are: (1) to examine the student nurses' current learning experiences at the hospital; (2) to determine the student nurses' desired experiences; and, (3) to compare and contrast their current clinical experience with their desired experience by integrating the data across the quantitative and qualitative studies.

### **3.3 Research questions**

The overarching research questions for this thesis are:

1. *What are the student nurses' experiences of their clinical placement at the Queen Elizabeth Hospital?*
2. *To what extent can the student nurses' experiences of their clinical placement be understood in the context of learning theories?*

### **3.4 Mixed Methods Design**

This research project is divided into two separate studies, a questionnaire survey followed by a qualitative interview study, and their findings will be synthesised to address the research questions. This approach is known as a 'mixed method' research design (Creswell & Plano Clarke, 2011). 'Mixed methods' is defined as a methodology (Creswell & Tashakkori, 2007; Burke Johnson, Onwuegbuzie, & Turner, 2007) that entails collecting and analysing deductive data (numbers) and inductive data (text or observation), and linking the data into a single or multiple

studies (Burke Johnson and Onwuegbuzie, 2004; Tashakkori & Creswell, 2007; Creswell & Plano Clarke, 2011).

The rationale for adopting a mixed methods approach that integrates the data from both studies was to understand student nurses' clinical placement learning experience at the QEH. It would have been difficult to fully understand the students learning experiences if the research gathered information via a single approach (either quantitative or qualitative) or two types of qualitative data collected in a multi-method study (but only uses one methodology) Teddlie & Tashakkori, 2009; Creswell and Plano Clarke, 2011).

The studies will collect data from multiple sources and thus the term triangulation may have some relevance (Moran-Ellis et al., 2006; Polit & Beck, 2014). In research, triangulation refers to the use of several methods or data sources within a single study, or multiple studies, for the purposes of confirming the research findings as well as to provide a better understanding of the phenomenon being studied (Patton, 2002; Yeasmin & Rahman, 2012). The present studies provide multiple perspectives on nursing students' learning experiences at the QEH because both deductive and inductive approaches are utilised (Moran-Ellis et al., 2006). There are four types of triangulation – data (using several data sources in a study), investigator (two or more researchers collect and interpret the data), theory (using more than one theory or hypothesis to interpret the data), and methodological (more than one data collection method is used) (Denzin, 2009). In the present research, data will be collected from two cohorts of student nurses in Barbados (more than one data source). The use of both questionnaires and qualitative interviews in the current research also demonstrates methodological triangulation. Notably, the in-depth interview findings would complement the survey findings allowing for further explanation of the questionnaire survey results (Greene, Caracelli, & Graham, 1989). Using both quantitative and qualitative approaches allowed for breadth, depth and clarity of the students' learning experience in the QEH. It has been suggested that the data from both quantitative and qualitative studies cannot confirm each other due to the incompatibility of the approaches but may only allow for a complete understanding of the learning experience (Risjord, Moloney & Dunbar, 2001).

Nevertheless, some element of confirmation will be found, for example if the students' rate 'being involved on the ward' and this is also discussed in the interview, this is evidence of confirmation. There are some elements of investigator triangulation, in that, the researcher's supervisors (CM & SH) interpreted the first two qualitative interviews for consistency. Since the theoretical perspective for the overall research emerged inductively, there is no evidence of theory triangulation.

The mixed method approach utilised in this project takes a pragmatic or practical stance (Burke Johnson & Onwuegbuzie, 2004; Feilzer, 2010), because the emphasis was placed on understanding the nursing students' practice learning experience at the QEH so that recommendations can be made to improve their placement experience. As indicated earlier, no single method will allow for a multifaceted view of the nursing students' hospital placement experience. Each study method has its strengths for answering the research objectives and research questions but yet they complement each other to resolve each method's weakness (Greene et al., 1989; Creswell, 2014). Thus, the questionnaire survey followed by in-depth interviews was thought to be best suited for accomplishing the overall aim of the research. This is termed a 'sequential explanatory mixed methods approach'.

The sequential explanatory approach differs from the sequential exploratory approach. Sequential exploratory approach is best suited to explore an unknown research area or to conceptualise for a new research tool (Creswell & Plano Clarke, 2011). Additionally, the qualitative study is performed first in a sequential exploratory mixed methods research approach followed by a quantitative method (Creswell, 2014). Figure 1 illustrates a visual diagram of sequential explanatory and sequential exploratory approaches. In the next section, the philosophical perspective underpinning the research design for this current research will be presented.

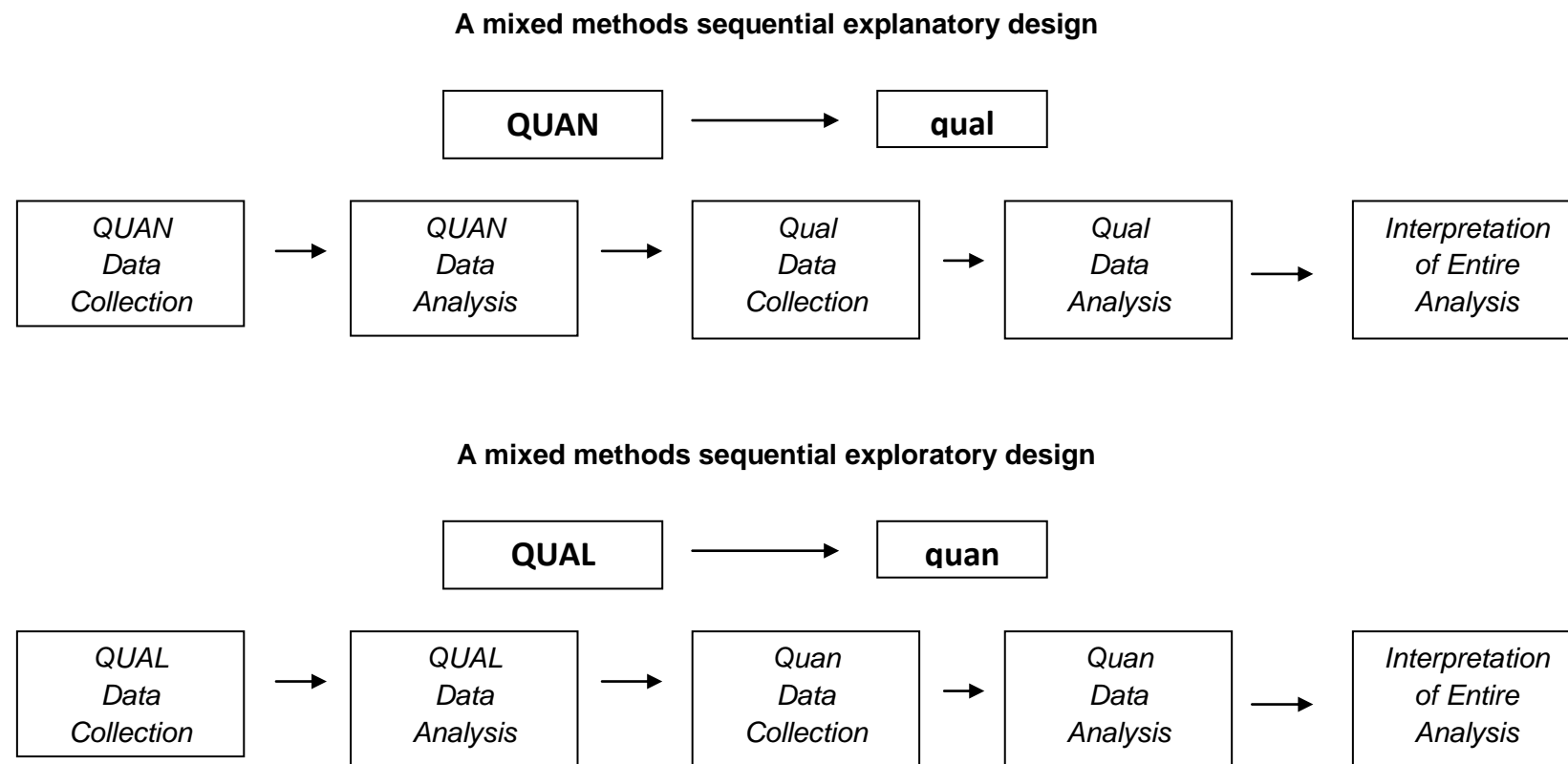


### **3.5 Philosophical stance of mixed methods research**

This thesis takes a pragmatic approach to examining clinical placement at the QEH. The pragmatic perspective allows the researcher to understand student nurses' learning experience in the hospital ward setting using various methods, different worldviews and assumptions (Creswell & Tashakkori, 2007). Thus, two separate studies using different methods – one quantitative and one qualitative – would enable the researcher to view the student nurse population from all relevant perspectives and to answer the overarching research questions. The core tenets of pragmatism are pluralistic; emphasis on solving real issues; and identifying methods best suited for the purpose of the research (Creswell, 2014).

In terms of pluralism, reality (ontology) exists both singularly (postpositivism approach) and multiply (interpretive/constructivism approach) in the student's world during ward placement (Creswell & Plano Clark, 2011; Feilzer, 2010). This is due to the multiple factors of the ward environment impacting on student nurses' learning and experiences. Furthermore, knowledge (epistemology) concerning the students' experiences is acquired by mixing the data from both studies (objectivism and subjectivism) to provide an understanding of students' experiences (Creswell & Plano Clark, 2011). Two different studies with different methods are more time-consuming to implement (Kettles, Creswell & Zhang, 2011; Creswell, 2014). The next section will describe the procedural aspects of the mixed methods approach utilised in the project.

Figure 1: A diagram of sequential explanatory and exploratory mixed methods research designs (Adopted from Creswell 2014)

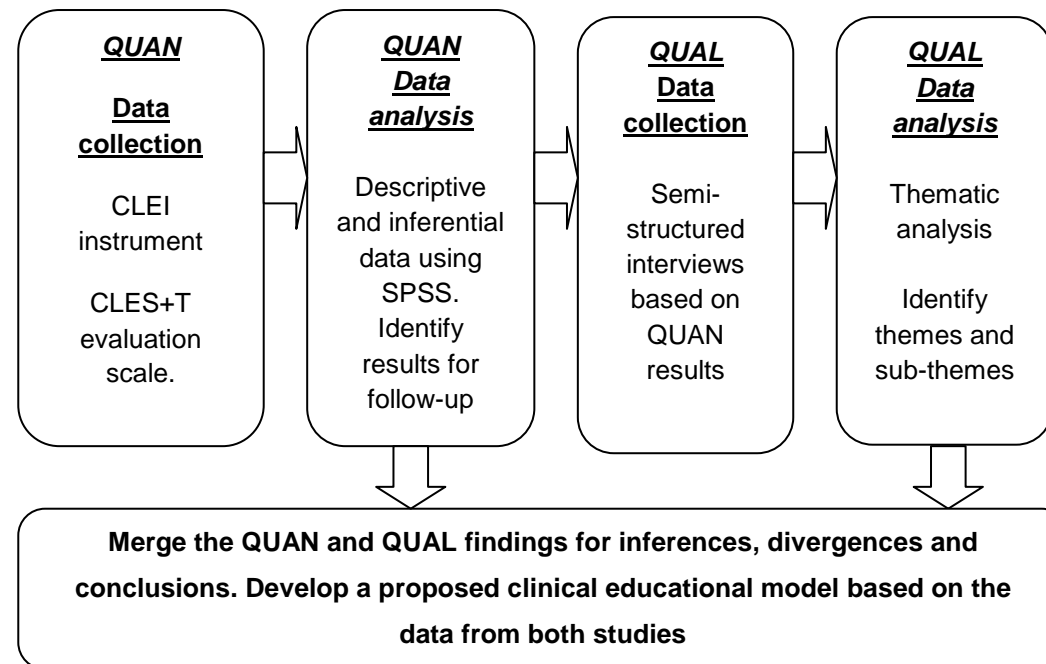


### 3.6 Rationale for the order of the studies

Four factors influence the decision for the order of the studies. These are sequencing (timing), priority (weighting), mixing (integration) and theoretical perspective (Creswell, 2014). **Figure 2** illustrates a visual model of the present research thesis design.

Sequencing refers to the timeframe for gathering and analysing data within a mixed methods research approach (Creswell & Plano Clarke, 2011). Data may be gathered at the same time using different methods termed concurrent, or one method would follow after the next, termed sequential, or a combination of both (Creswell, 2014). In the context of this thesis two issues impact on the timing of the studies: that of research purpose, and educational structure of the local nurse training system. A questionnaire survey will first be conducted (Study 1) using two validated tools in order to acquire a representative and general understanding of the learning experience. The tools to be use are the 'Clinical learning Environment Inventory' (CLEI) (Chan, 2003) and the 'Clinical Learning Environment, Supervision and Nurse Teacher' evaluation scale (CLES+T) (Saarikoski et al., 2008). After analysis of the questionnaire data, follow-up interviews will be conducted with a purposive sample of nursing students (Study 2). No mixed methods studies were identified in the nurse education literature which employed a sequential explanatory design to explore the context of learning in clinical placements.

Figure 2: A sequential explanatory mixed methods study to measure and explore student nurses' clinical placement learning experience at the Queen Elizabeth Hospital



The educational structure of the basic nurse training at the BCC will also influence the timing of the studies. An academic year includes two semesters and a summer period. During each semester, clinical placements run concurrently with classroom theory and the summer period is dedicated solely to clinical placements (Barbados Community College Division of Health Sciences, 2013). There are no clinical placements for first year students of this programme. Clinical placement during the summer period ranges from 8 to 13 weeks for second and third year students, respectively (Barbados Community College Division of Health Sciences, 2013). A major component of student nurses' practical training during the summer extended period is based at the QEH (Barbados Community College, 2006). Therefore, it is advisable to collect the quantitative data during the extended summer period when students are consolidating their clinical skills. Consequently, this impacts the timing of the semi-structured interview data collection because the interview guide has to be developed after questionnaire data analysis is complete.

Priority refers to giving data from one method greater emphasis than another, or that both are equally emphasised in answering the research question(s) (Creswell, 2014). In the case of this research the two contrasting methods in the two different studies are given equal weight. The weighting is indicated by the uppercase letters over the studies in **Figure 2**. Some researchers may give the questionnaire data more weight which is illustrated by uppercase letters to the questionnaire data and lowercase to the qualitative data (see **Figure 1**). The rationales for giving equal weight to the data from both studies were:

1. Each study with its own methods brings distinct knowledge (epistemology) and reality (ontology) regarding the students learning experiences (Moran-Ellis et al., 2006).
2. As it was intended to link the numbers (Study 1) and text (Study 2) to answer the overarching research questions it was thought best to give the different data equal priority.

Mixing refers to combining the data gathered from different methods within the same study or different studies (Kettles et al., 2011). Creswell and Plano Clarke (2011) highlight three ways of mixing the data: merging (data from different methods are mixed), embedding (mix data from one method within a design using different data) and connecting (one piece of data leads to or builds upon another). In this thesis, the questionnaire results will guide the development of the qualitative interview guide indicating some element of connecting of the data. Embedding of the data will not occur as the qualitative data will be collected from a different cohort. Merging will occur in the interpretation and discussion of the research in Chapter 6. The data from both studies are compared and contrasted and discussed in the general discussion (Chapter 6). Merging data from different methods and analysis at the point of general discussion of the thesis is termed an 'interpretive integration framework' (Moran-Ellis et al., 2006, p. 56). The use of this framework in this thesis provides the opportunity to theorise on the nursing students' learning experiences in relation to the literature and learning theories. It must be noted the overall findings (to the research questions) are based on researcher interpretation.

While the background of the thesis in Chapter 1 provided an overview of the general learning theories, no prescribed theoretical framework guided the overall research process. Instead, the theoretical perspective for the overall research process emerges inductively. Each study within the mixed methods approach has its own explicit theoretical framework (see Chapter 4 for Study 1 and Chapter 5 for Study 2). Descriptive and correlation results from the quantitative study will be integrated with themes emerging from the qualitative interviews to throw light upon the student nurses' learning experiences on hospital ward placement in the context of the literature and learning theories. Finally, a clinical educational model on student nurses' learning in the hospital ward environment is proposed.

### **3.7 Research questions for each study**

Research questions within a deductive framework based on the validated questionnaires are to be used in the questionnaire survey (see Chapter 4). Inductive questions for the qualitative interview study are to be developed after the questionnaire analysis (see Chapter 5).

### **3.8 Ethical Issues**

The Barbados Community College does not have a research ethics committee to approve formal applications to conduct empirical studies. Therefore, permission was sought and granted to conduct the research project from the Principal of the Barbados Community College (see Appendix B). The research project was also approved by the 'Research Ethics Approval Committee for Health' (REACH), formerly known as the 'Student Research Ethical Approval Panel' (SREAP) at the University of Bath (see Appendix C).

At the time of data collection for both studies, my post as Clinical Coordinator in the Department of Nursing may have interfered with nursing students' responses. The role of clinical coordinator did not entail supervision of the student nurses. The responsibilities of the clinical coordinator included collating students' marks for their clinical competence skills and nursing process care assignments. The power relations between student nurse and teacher may lead to students feeling obligated to participate in the research studies. Therefore, a colleague from the nursing department was selected to invite student nurses to participate in the studies. The colleague administered the participants' information sheets for both studies and distributed the questionnaires in Study 1. This ensured that student nurses were not obligated to participate in the studies. Participant information sheets distributed in studies informed students that they had the option to participate in the research project and ensured anonymity. Furthermore, their choice to decline would have no impact on their studies. It was important for participants to understand the researcher would maintain anonymity in the research thus allowing the student nurses to freely express their views regarding their learning experiences. Also, the anonymity of hospital unit will be maintained

in the thesis, so the type of specialty of the ward was indicated but not the name of the clinical unit, especially during qualitative study (Study 2).

#### *Study 1: Questionnaire survey*

Returned completed questionnaires implied informed consent. Confidentiality was maintained through anonymous questionnaires, while returned questionnaires were deposited in a box located in the nursing department. Questionnaires were stored in a locked cabinet in the department.

#### *Study 2: Qualitative interviews*

Interested participants were invited by a colleague to contact the researcher directly to arrange an interview date. Participants were informed that the interview was voluntary and that they were free to withdraw at any time during the data collection and analysis process. This was reiterated at the beginning of each interview. Written consent was obtained prior to conducting the interview and this information was kept from the interview data. During the qualitative interview collection phase, thought was still given to the effect this power relation between student and researcher could have on the data. It was important that during the interviews, the researcher focused on asking the questions on the interview guide and probe responses. Also, reassuring the participant in regards to confidentiality, anonymity, and ability to withdraw from the study without any impact on their studies when necessary during the interviews. In one participant's interview, the recording was stopped because the interviewee experienced difficulty in recounting the experience due to an incident that had occurred. The participant was reassured of confidentiality and anonymity and with this assurance, agreed to continue the interview. Transcription of the interview audiotapes was performed by the author of this thesis to maintain confidentiality. Participants were given a personal identification number (PIN), e.g., Student 1, and the true identity is known only by the researcher. The transcribed interviews were secured on password protected external drives. Original recordings and external drives were kept at the researcher's home. All recordings will be subsequently destroyed in accordance with University of Bath policy.



### **3.9 Chapter summary**

This chapter provides the overall research aim, objectives and research question for the current research project. Next, the rationale for adopting a mixed methods approach is discussed. The research followed a sequential design by which the questionnaire study is administered first followed by semi-structured interviews. Thus the research is explanatory in nature and the two studies complement each other in addressing the research questions. Finally, the ethical process is presented. The three chapters that follow present the methods, findings and discussion for the questionnaire study (Chapter 4) and qualitative semi-structured interviews study (Chapter 5). Chapter 6 discusses the findings based on the synthesis of the data from both studies to address the research questions.

## **Chapter Four: Study One - A Questionnaire Survey: Method, Results and Discussion**

### **4.1 Chapter overview**

The previous chapter focused on the general methodology for the research studies presented in this thesis. It presented a rationale for adopting a sequential explanatory mixed methods approach, the philosophical stance and the rationale for the order of the studies (quantitative study followed by qualitative study). Finally, the ethical processes involved in conducting the research projects were discussed.

This chapter focuses on the quantitative aspect of the research, in terms of the method, results and discusses the results. Firstly, the research questions for the quantitative study, theoretical basis to the quantitative study and methods are presented. This is followed by a description of the sample, the research setting, and a brief discussion of ethical considerations. Next, the data collection and the instruments used in the study are presented. Following this, a description of the data analysis is presented. Finally, the results are presented and subsequently discussed.

### **4.2 Survey study aims and questions**

The aims of the questionnaire survey study were to:

- (1) Examine nursing students' perceptions of their current placement experience in relation to their desired experience at the Queen Elizabeth Hospital and,
- (2) Identify the factors contributing to their satisfaction with the hospital placement.

The following research questions were formulated for the quantitative study:

1. How do Barbadian student nurses' perceive their current learning experience at the Queen Elizabeth Hospital?
2. Are there differences between student nurses' perceptions and experiences of their current and desired hospital learning experience?
3. Is there a relationship between students' satisfaction among nursing students at the Barbados Community College and their current learning experience at the Queen Elizabeth Hospital?
4. Is there a relationship between students' satisfaction among nursing students at the Barbados Community College and their desired learning experience at the Queen Elizabeth Hospital?

The quantitative research questions outlined above relate to research objectives 1- 2 found in Chapter 3, which are:

- (1) To examine the student nurses' current learning experience at the hospital.
- (2) To determine the student nurses' desired clinical learning experience.

#### **4.3 Quantitative theoretical perspective**

The theoretical basis to the study (Study 1) is established on two separate instruments used to measure the hospital ward learning environment. Chan (2002b) developed the subscales in Clinical Learning Environment Inventory (CLEI), based on classical theoretical work done by Moos (1973), Lewin (1935), Murray (1938) and, Fraser and Fisher (1983a). The development of Chan's questionnaire tool is based on the following:

1. Moos' three basic categories of human environment (Moos 1973), and
2. Person-Environment Fit theories by Lewin (1935), Murray (1938) and Fraser and Fisher (1983a).

Saarikoski and Leino-Kilpi (2002) and Saarikoski et al. (2008) developed the subscales in the Clinical Learning Environment, Supervision and Nurse Teacher

(CLES+T) tool, based on a review of the literature regarding clinical learning environment, supervision and the role of the clinical nurse instructor in the hospital setting. A visual representation of the theoretical frameworks for this study is presented in Figure 3.

Moos (1974, cited in Chan 2002b, p.72) suggested that the psychosocial environment (e.g., hospital wards) dictates human behaviour. He believed the human environment consists of three features identified as relationship, personal development and system maintenance and change (Moos 1973). The meanings of each feature of Moos' theory of human environment are described in Table 6. Based on Moos' theory of human environment, Chan (2001a; 2002b) conceptualised the CLEI questionnaire to measure the hospital ward learning environments from the student nurses' standpoint. He formulated six subscales: personalisation, involvement, satisfaction, task orientation, innovation and individualization (Chan 2001a; 2002b). Table 6 provides descriptive information on each subscale of the CLEI and their relationship to Moos' general features of human environment. For this study it was proposed that student nurses would view their hospital experience as good in the presence of the following:

1. Opportunities to interact with the supervising registered nurse who shows concern for the student's personal welfare (personalisation)
2. Active participation on the ward (involvement)
3. Enjoying the placement (satisfaction)
4. Clear and well organised ward activities (task orientation)
5. The registered nurse supervising the students demonstrate innovative teaching and learning strategies (innovation)
6. Students are given opportunities to make clinical decisions and the supervisor treats each student differently based on the student's ability and interest (individualisation)

Figure 3: Theoretical framework underpinning questionnaire survey study

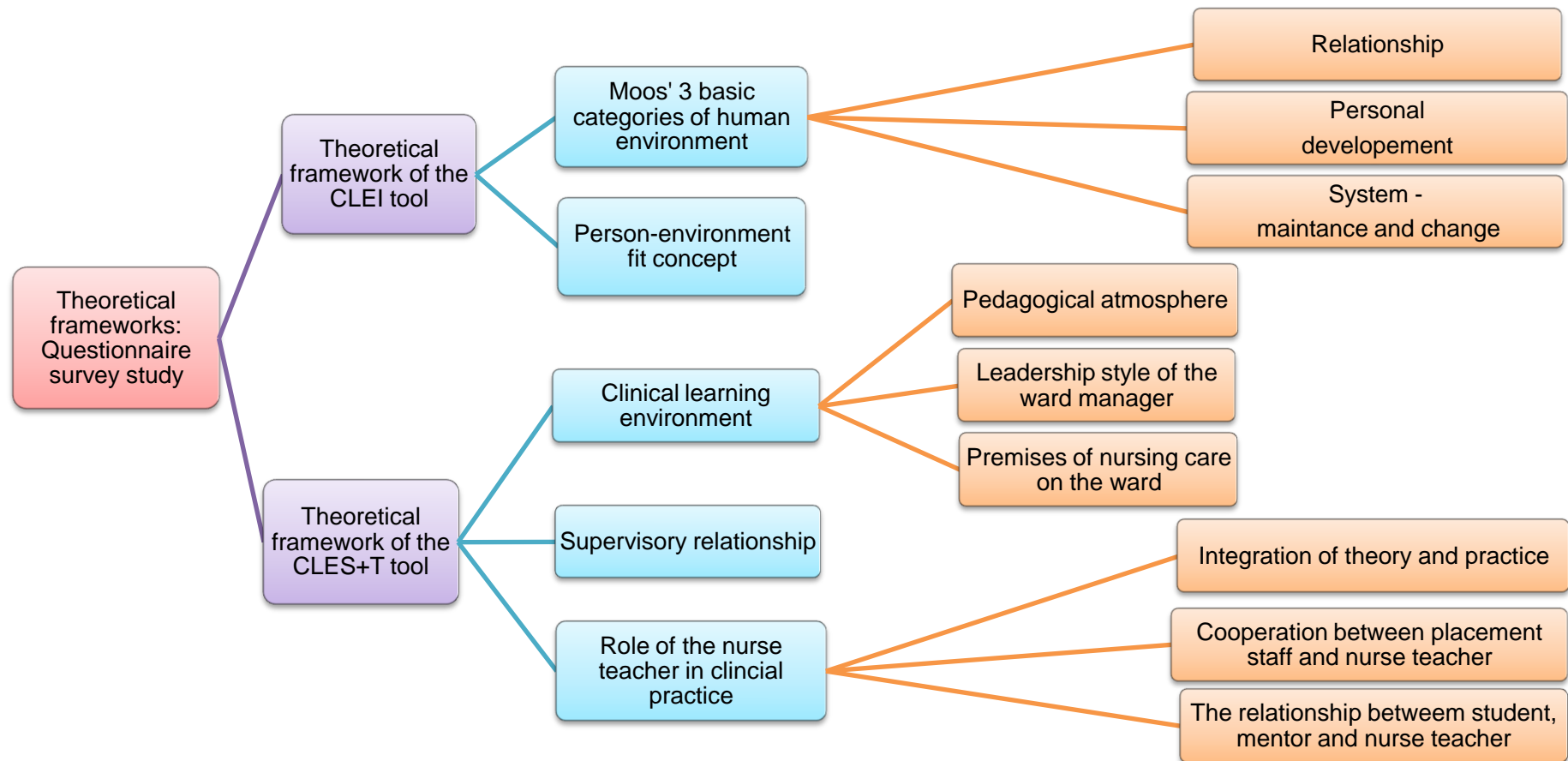


Table 6: Categories, correlated CLEI construct to Moos' human environment theory and central theoretical assumptions

Categories of human environment and central tenets	CLEI constructs which correspond to Moos category	Central tenets of the CLEI constructs
<b><i>Personal Development (Goal orientation)</i></b>  Determines maturity and self-esteem	<b><i>Task orientation</i></b>	The extent to which the ward/clinical unit activities are clear and well organized to the student.
	<b><i>Satisfaction</i></b>	The extent of students' enjoyment from their practical training on the clinical unit.
<b><i>System maintenance and system change</i></b>  The degree to which the environment is orderly, clear in expectations, maintains control and responds to change	<b><i>Individualization</i></b>	The extent to which students are allowed to make decisions and are treated according to their ability or the interest shown.
	<b><i>Innovation</i></b>	To what extent the supervising nurse planned interesting ward experiences and activities, and students' views of staff teaching abilities.
<b><i>Relationship</i></b>  Recognize the nature and intensity of personal relationships within the environment and the mutual support and mutual aid.	<b><i>Involvement</i></b>	To what extent students participate actively and consistently in clinical unit activities.
	<b><i>Personalization</i></b>	Emphasizes the opportunities that the student has to interact with the supervising nurse, who also shows concern for the student's personal welfare.

Adapted from Chan (2001a; 2002b; 2003)

As indicated previously, Chan (2002b) also developed the subscales in Clinical Learning Environment Inventory (CLEI) based on the classical theoretical works of Lewin (1935, cited by Chan 2002b, p.72), Murray (1938, cited by Chan 2002b, p.72), and Fraser and Fisher (1983a; 1983b, cited by Chan 2002b, p.71) in relation to the concept 'person-environment fit'. Lewin (1935) believed that students' behaviour was a function of the student (person=P) and their learning environment (E) termed the Lewinian formula  $B = f(P, E)$ . In other words, a student's level of satisfaction (behaviour or output) is based on the relationship between the inputs (student and the ward environment). Murray (1938, cited by Chan 2002b, p.72), expanding on Lewin's work, suggested a 'needs-press theory'. It is believed that a link exists between the needs (internal) and the environment press (external) (Murray, 1938 cited by Chan 2002b, p.72). In relation to this study, student nurses' satisfaction (needs) is linked to the hospital environment (press).

Another assumption determines whether there is congruence between students' current learning and desired placement experience. Fraser and Fisher (1983b, cited by Chan 2002b, p.71) suggested that similarities between the real and desired environment enhance student outcomes (i.e., good or bad experience). In other words, student nurses' satisfaction is more enhanced when there is similarity between the real ward and ideal ward. The reverse can also be said for a negative ward experience. As a result, there are two versions of the CLEI tool, actual and preferred (Chan 2002b). One version measures student nurses' views of the real hospital experience (Actual CLEI), while the other measures student nurses' views of their ideal experience (Preferred CLEI) (Chan 2003). For this survey the terms current CLEI and desired CLEI are used.

Finally, the theoretical framework of the CLES+T questionnaire (Saarikoski & Leino-Kilpi, 2002; Saarikoski et al., 2008) also influenced this study. Saarikoski et al. (2008) suggested that the pedagogical atmosphere, the leadership style of the ward sister, the premises of nursing care on the ward/unit, supervisory relationship, and the role of clinical instructors (see definitions below Table 7) contribute to student nurse learning on placement.

Table 7: Variables and the central theoretical assumptions underpinning the CLES+T questionnaire

Variables	Central theoretical assumptions
<b><i>Clinical Learning Environment</i></b>	
Pedagogical atmosphere on the ward	The degree to which the ward atmosphere is positive to allow for mistakes and asking questions; and, the interaction with ward staff is positive.
Leadership style of the ward sister	The degree to which the ward sister appreciates her nursing staff as key resource; acts as a ward team player; and, provides feedback to students.
Premises of nursing care on the ward	The degree to which the ward philosophy is clearly defined; patient receives individualized care; there is efficient information on patient care; and clear nursing documentation.
<b><i>Supervisory relationship</i></b>	
	The degree to which clinical supervision is based on mentorship; supervisor has a positive attitude towards supervision; there is positive interaction between supervisor and nursing student; and supervisor provides feedback.
<b><i>Role of the Nurse Teacher in clinical practice</i></b>	
Enabling of the integration of theory and practice by the nurse teacher	The degree to which the CI is able to bridge the theory-practice gap and clarifying the students' placement learning objectives to supervisor.
Cooperation between clinical placement and nurse teacher	The degree to which the CI is a team player on the clinical unit and provides advice to the unit nursing team.
Relationship among student, mentor and nurse teacher	The degree to which the CI hold meeting between clinical supervisor and student nurse to discuss student's learning needs.

Adapted from Saarikoski and Leino-Kilpi (2002); Saarikoski et al. (2008). *Note:* CI – Clinical instructor



In other words, if student nurses perceived the following they would have a good ward experience:

- A supportive ward/unit atmosphere, positive staff nurses' attitudes and effective communication among the ward nurses (pedagogical atmosphere on the ward),
- The ward sister fosters a positive ward team spirit due to her less hierarchical management style. This is reflected in how the ward functions (leadership style of the ward sister),
- There is a high standard of care exhibited by ward nurses (premises of nursing care on the ward),
- The qualified nurse mentors the student, and the staff nurses exhibiting a positive attitude towards supervising student nurses (supervisory relationship)
- The roles of the clinical instructor in practice are threefold: (1) linking the classroom theory and practice (integration of theory and practice); (2) team player and sharing their expertise with clinical staff (cooperation between placement staff and nurse teacher) and (3) fostering positive interaction between the student nurse, the nurse supervising the student and themselves (clinical instructors) (Saarikoski & Leino-Kilpi, 2002; Saarikoski et al., 2008)

The present study (study 1) assumes (1) student nurses' views and experiences on the ward/unit are influenced by the ward environment, supervision by staff nurses and the clinical instructor; (2) the ward environment includes three basic features according to Moos' theory of human environment; (3) student satisfaction is linked to the relationship between student nurse and ward setting; and (4) no differences exists between student nurses' current learning experience and their desired experience.

#### **4.4 Study one methodology**

This section describes the rationale to the research method used in this study (a survey by questionnaire). The first research question was 'How do Barbadian student nurses' perceive their current learning experience at the Queen Elizabeth Hospital?' This research question is descriptive in nature because it seeks to describe 'what' exists in the learning experience on the assigned ward placement and to identify 'how many' student nurses (numbers and percentages) (Bowling, 2014). An inductive approach (qualitative) is appropriate for exploring student nurses' views of the current situation and enables exploration of the 'why' and 'how' of the students' experiences through the use of words. However, it is not appropriate for research questions that seek to answer the 'what' and 'how many' (Toles & Barroso, 2014). A qualitative inductive approach was therefore inappropriate for this study.

Another rationale for a survey by questionnaire approach is the fact that research questions 2 through 4 focus on correlation to determine linkages (patterns) in the numerical data (Coolican, 2014). Research question 2 compares and contrasts the current and desired experiences of student nurses: 'Are there differences between student nurses' perceptions and experiences of their current and desired hospital learning experience?' Research question 3 focuses on the relationship between nursing students' satisfaction with current learning experience. Research Question 4 focuses on the relationship between student satisfaction and the desired experience. It is not the purpose of this questionnaire study to ascertain the cause for the patterns and give reasons for them (why) (Toles & Barroso, 2014). Causality is the focus of experimental research (Bowling, 2014).

Data were collected from the target student nurse population, from two student nurse cohorts (second and third year students), at a single point in time. This is a cross-sectional approach (Toles & Barroso, 2014; Bowling, 2014). Therefore, Study 1 is a cross-sectional study across cohorts of second and third year student nurses. Due to the focus of this survey study on 'how many' students and

relationships among the numerical data, the approach is quantitative in nature (Bowling, 2014; Coolican, 2014).

#### **4.5 Study one method**

A questionnaire format was selected for this survey study. It was chosen because the varied opinions and learning experiences of the student nurses “can be fitted into a limited number of predetermined response categories to which numbers are assigned” (Patton, 2002, p.14). The statistics collected about the student nurses population provide a description of ‘what exists’ on clinical placement according to pre-determined measures (Coolican, 2014). Practically, questionnaire surveys can save time and money because they are easy to distribute to a large sample group and easy to analyse (Polit & Beck, 2014). The next section will describe the questionnaire tools to be use in Study 1.

##### **4.5.1 Instruments**

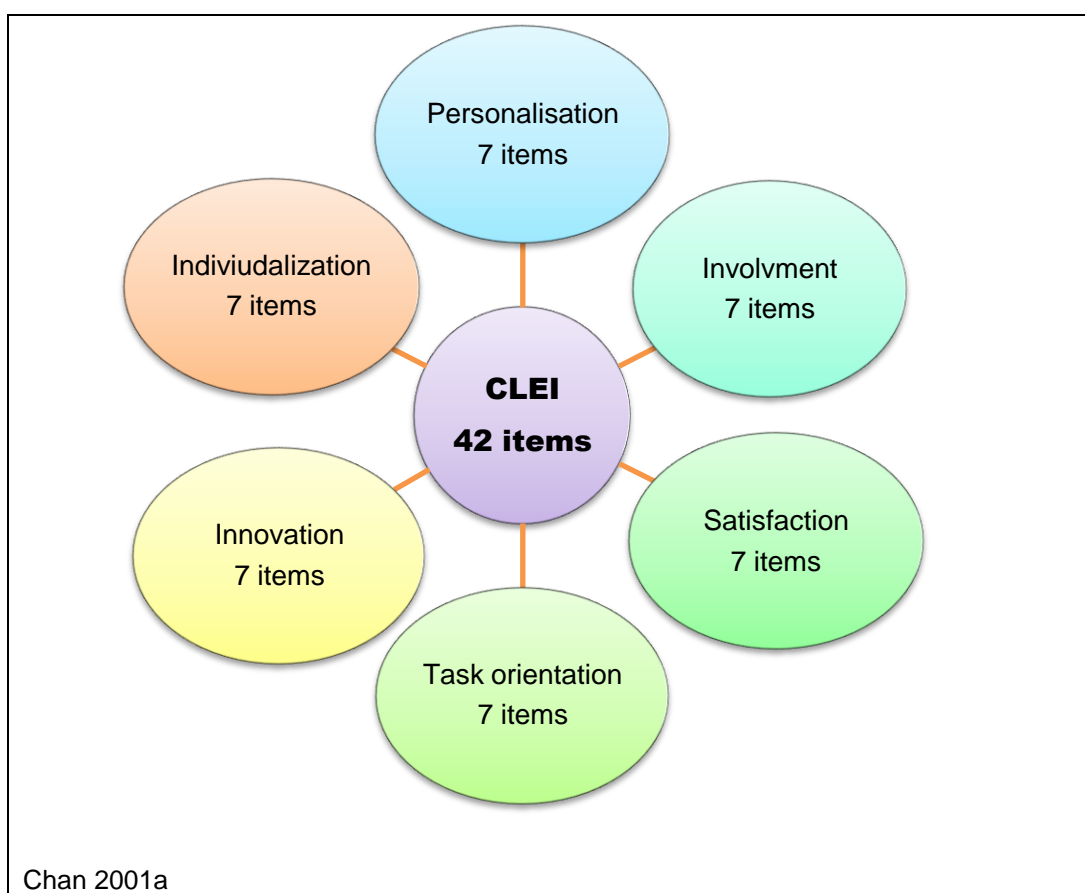
The Clinical Learning Environment Inventory (CLEI) (Actual and Preferred forms) (Chan, 2001a; 2002a), and the Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale (Saarikoski et al., 2008) are used in this study (see Chapter 2 for rationale of questionnaire selection). Permission was granted by Professor Chan and Dr. Saarikoski for the use of their tools (see Appendix D and Appendix E respectively) and to modify the questionnaires to ensure they are applicable to the Barbadian context. For example, the words ‘mentor’, ‘clinician and ‘clinical teacher’ were replaced by ‘supervising registered nurse’ in this study.

Each tool consists of 5 demographic questions relating to the student (age, gender, level of study and previous nursing-related experience) and the type of ward. Also, demographic questions relating to the supervisory conditions on the student’s clinical unit (title of supervisor, type of supervision, and frequency of supervision) are added to the CLES+T questionnaire.

### Clinical Learning Environment Inventory

This tool was developed by Professor Chan (2001a). It consists of two versions of the CLEI, an actual form measuring students' opinions of their current hospital placement learning experience, and the preferred form, which measures students' opinions of their ideal hospital placement learning experience (Chan, 2003). The questionnaire has a total of 42 items divided into 6 concepts (subscales) (see Figure 4). Each concept (subscale) includes 7 items (see Appendix F). Questionnaire items are scored on a Likert-scale from 1 to 5, with 3 being assigned for items with no response or invalid. Positively worded items are scored 5 = "Strongly Agree", 4 = "Agree", 2 = "Disagree", and 1 = "Strongly Disagree". Negatively worded items are scored in the reverse manner (Appendix F). Appendix G and Appendix H presents the Current CLEI and Desired CLEI questionnaires, respectively, which were distributed.

Figure 4: A visual representation of the concepts and number of items in the Clinical Learning Environment Inventory (CLEI)



In the current quantitative study, subscales of the two versions of the CLEI questionnaire were compared with each other to determine whether a fit existed between the actual and desired experiences. In this study the term 'preferred' was re-worded to 'desired' to make the language more meaningful to the students. Additionally, to determine which subscales influenced student's level of satisfaction, satisfaction was compared to the other subscales of both versions of the CLEI (current and desired).

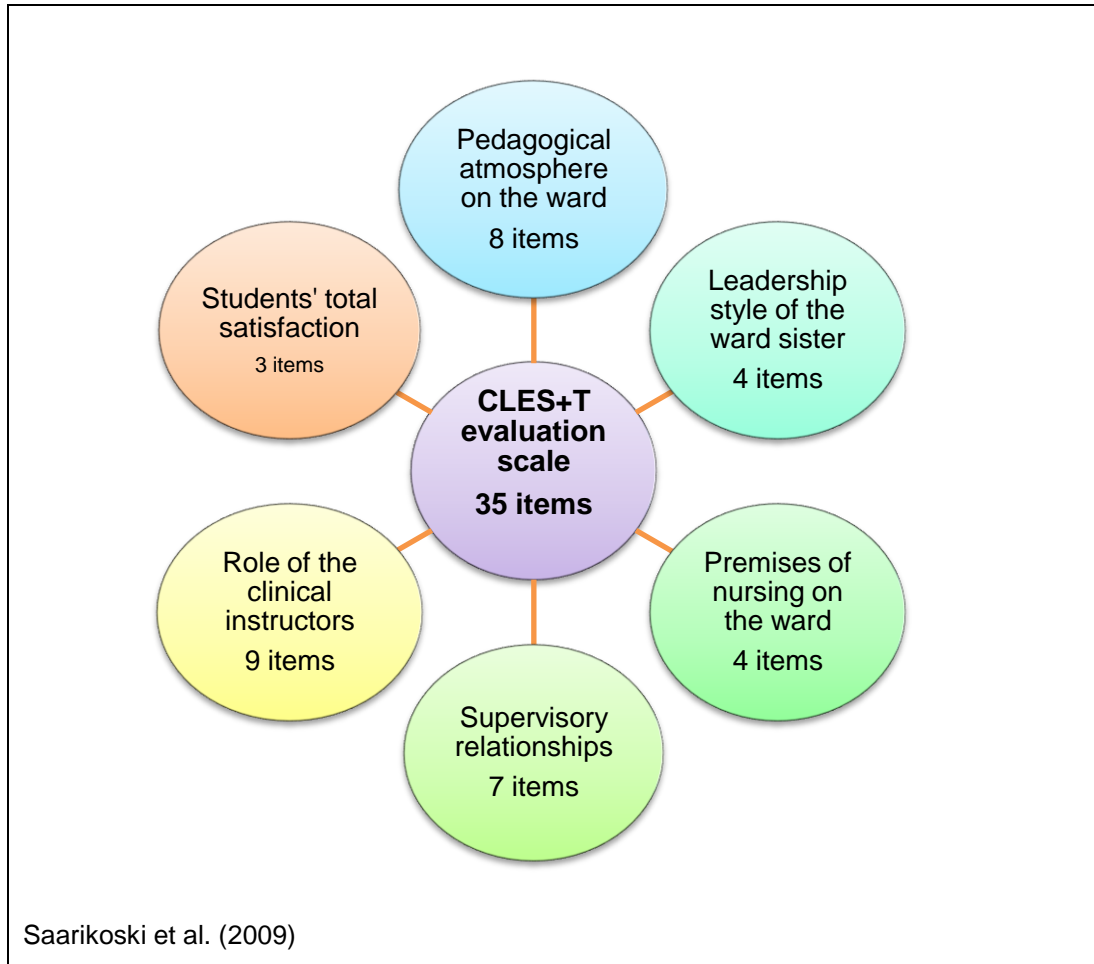
#### *Clinical Learning Environment, Supervision and Nurse Teacher evaluation scale*

This tool was developed by Saarikoski et al. (2008). The tool is a modification of the CLES (Saarikoski & Leino-Kilpi, 2002). It includes 34 items and five subscales: 'pedagogical atmosphere on the ward' (9 items), 'leadership style of the ward manager' (4 items), 'premises of nursing care' (4 items), 'supervisory relationship' (8 items), and 'role of the nurse teachers' (9 items). Saarikoski et al's, (2008) CLES+T did not have a specific domain to measure student satisfaction. However, Saarikoski et al. (2009) added a student satisfaction subscale to the questionnaire. The satisfaction subscale includes three items of which two are taken from within the actual tool: 'The ward can be regarded as a good learning environment' ('pedagogical atmosphere' domain) and 'Overall I am satisfied with the supervision I received' ('supervisory relationship' domain). The item 'I am satisfied with the clinical placement that has just ended' was added to the satisfaction subscale. Thus, the questionnaire has 35 items in total and six subscales (see Figure 5). Each item is based on a Likert format from 1 = fully disagree; 2 = disagree to some extent; 3 = neither agree nor disagree; 4 = agree to some extent and 5 = fully agree. Appendix I present the questionnaire which was distributed.

#### **4.6 Ethical considerations**

See Chapter three.

Figure 5: A visual representation of the concepts and number of items in the Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) tool



#### 4.7 Sample and setting

The targeted populations and potential sample size for this study were second year ( $n = 94$ ) and third year ( $n = 97$ ) nursing students enrolled in the basic general nursing programme at the Barbados Community College. These students were eligible because they were on clinical placement at the time of data collection. First year nursing students were not eligible for this study because they were not on clinical placement. The general nursing programme is of three years' duration leading to an Associated Degree in Applied Science (General Nursing). Barbados Community College is the sole nurse training institution in Barbados and is government operated.

#### **4.8 Data collection**

A colleague from the nursing department invited student nurses to participate in the study and administered the questionnaires. Participant information sheets (see Appendix J) and questionnaires (Appendix G, Appendix H and Appendix I) were administered to potential respondents at the end of a tutorial session conducted for the third year students as well as at the end of a clinical skills laboratory session for the second year students. The information sheet informed students that they had the option to participate in the research project and ensured anonymity. Furthermore, their choice to decline would have no impact on their studies. The colleague reiterated that participation was voluntary and that returned completed questionnaire implied informed consent.

Data collection took place between June and July of 2009 for the academic year 2008-2009. Eligible student nurses were, at the time, undertaking placements at different health care facilities, such as the Queen Elizabeth hospital, Geriatric hospital, Psychiatric Hospital, and Polyclinics (Community Health). Student nurses were asked to evaluate their last assigned clinical ward or unit completed on placement at the Queen Elizabeth Hospital. The longest duration possible could have been since a student's worked at the QEH was a week. The duration since the experience may have impacted on the student's ability to recall their experiences accurately. A period of one week was provided for students to complete the questionnaires. Confidentiality was maintained through anonymous questionnaires, while returned questionnaires were deposited in a box located in the nursing department. Questionnaires were stored in a locked cabinet in the department.

A non-random (non-probability) purposive sampling approach (Polit & Beck, 2014) was chosen for this survey study so that all second and third year student nurses on clinical placement were invited to participate.

#### 4.9 Data analysis

Data were analysed using the software Statistical Package for the Social Sciences (SPSS) version 16.0 for Windows. Several items of both questionnaires were modified for applicability to the Barbadian student nurse population. Therefore, internal consistency reliability of both questionnaires and their respective subscales were assessed using Cronbach's alpha (LoBiondo-Wood & Haber, 2014). The need to test the internal consistency of the modified questionnaires was due to the fact that the current sample differs from the original samples for developing the questionnaires (LoBiondo-Wood and Haber 2014) and the wording of some questions was changed. For each questionnaire, descriptive statistics are performed to summarize the data (Morgan, Leech, Gloeckner & Barrett, 2011) including frequency ( $n$ , %), mean, standard deviation and median. A mean and median score above 17.5 of 35 in the CLEI domains and above 3 of 5 in the domains of the CLES+T tool was interpreted as a good ward experience.

The domains 'innovation' and 'individualization' on the Current CLEI form had normal distributions of 0.37 and 0.18, respectively. The other domains of the Current CLEI were negatively skewed in distribution ranging from -0.01 to -0.61. In addition, the domains in the Desired CLEI and the CLES+T questionnaires (tools) were negatively skewed as well (-0.24 to -1.93 and -0.51 to -1.09, respectively). As a result of the non-normal distribution of the majority of the domains, Spearman rho correlation non-parametric test was used to assess the correlation between student 'satisfaction' with the other domains in both questionnaires (Watson & MeFadyen 1996; Morgan et al. 2011).

Wilcoxon signed-ranks test was used to detect statistically significant differences between the current experience and the desired. This is a non-parametric test which takes into account ordinal and skewed data (Watson & MeFadyen, 1996).

Differences in the student nurses' ratings of their satisfaction and demographic information were assessed using the Kruskal-Wallis one-way analysis of variance



test. The Kruskal-Wallis test is a non-parametric test used to determine statistically significant differences between three or more independent variables when data are either ordinal or exhibit skewed distribution (Morgan et al., 2011). If a statistically significant difference was found, then Mann-Whitney *U* test (non-parametric) was performed to determine which groups differed from each other (Watson & MeFadyen, 1996). The statistical significance of level for the tests was set at  $p < 0.05$ .

#### **4.10 Results**

This section provides the results of the data analysis and places the numerical data in the context of the research questions addressed in the questionnaire survey study. First, the section includes descriptions of the data in terms of the sample characteristics and ward placement. Then, the data are presented in the context of the survey study research questions.

Due to similarities between the mean and median scores, the means are used for the descriptive data. The majority of the subscales in the different questionnaires were skewed. Therefore, non-parametric tests were performed on the inferential data. As a result, the median will be reported for the inferential data because of the use of non-parametric tests. The current data may vary between the mean being reported and median being reported.

##### **4.10.1 Sample and clinical unit placement**

The descriptive data presents the characteristics of the respondents, background variables (title of supervisor, type of supervision, frequency of supervision, ward specialty) at the time of data collection.

From a total of 191 targeted student nurses, 151 (79%) students returned the CLEI (current and desired) questionnaires and 152 (79.6%) students returned the CLES+T questionnaires. Seventy-three second year (48.3%) and seventy-eight

(51.7%) third year student nurses from the 151 responses submitted the Current CLEI questionnaire. Seventy-one second year (47.0%) and seventy-five (49.7%) third year's student nurses of all 151 responses submitted the Desired CLEI questionnaire. Seventy-five second year (49.3%) and seventy-seven (50.7%) third year students of all 152 responses returned the CLES+T questionnaires. The majority of the students were within the age range 21-30 years ( $n = 77$ , 51% Current CLEI;  $n = 78$ , 51% Desired CLEI;  $n = 78$ , 51% CELS+T). Table 8 provides demographic information of the student sample.

Some of the students reported previous-related nursing experience as an Enrolled Nurse ( $n = 53$ ) or Nursing Aide ( $n = 1$ ) in the Current CLEI questionnaire. Student nurses were assigned to several hospital wards or clinical units across the Queen Elizabeth Hospital for practical training (see Table 9). The most common ward was medical.

The majority of the supervisors were staff nurses ( $n = 82$ , 54%). In addition, the majority of students reported the 'supervisor varied according to shift and place' ( $n = 48$ , 32.4%). The qualified nurse assigned to the student changed according to the shift allocation for the week and type of ward or clinical unit. Some student nurses experienced a named personal supervisor and the relationship worked well ( $n = 43$ , 29.1%). Seven students (4.7%) reported that no supervisor was appointed on their allocated ward placement. Fifty-four student nurses (38.8%) reported experiencing more supervision with their supervisor while 49 student nurses (35.3%) did not have any supervision.

Table 8: Demographic characteristics of nursing students responding to CLEI  
(current and desired forms) ( $n = 151$ ) and CLES+T ( $n = 152$ )

Variables	CLEI		CLES+T <i>N</i> (%)
	Current <i>N</i> (%)	Desired <i>N</i> (%)	
<b>Age (Years)</b>			
< 20	20 (13.2)	20 (13.2)	21 (13.8)
21-30	77 (51.0)	78 (51.7)	78 (51.3)
31-40	25 (16.5)	25 (16.5)	28 (18.4)
> 41	26 (17.2)	24 (16.0)	25 (16.5)
Missing	3	4	0
<b>Gender</b>			
Male	17 (11.3)	16 (10.6)	17 (11.2)
Female	134 (88.7)	131 (86.8)	135 (88.8)
Missing	0	4	0
<b>Study year</b>			
Second	73 (48.3)	71 (47.0)	75 (49.3)
Third	78 (51.7)	75 (49.7)	77 (50.7)
Missing	0	5	0
<b>Related work experience</b>			
Yes	54 (35.8)	50 (33.1)	55 (36.2)
No	96 (63.6)	95 (62.9)	97 (63.8)
Missing	1	6	0
<b>Supervisor title (<math>n = 136</math>)</b>			
Staff nurse			82 (54)
Specialist nurse			5 (3.3)
Ward sister			49 (32.2)
<b>Type of supervision (i.e., occurrence of supervision) (<math>n = 148</math>)</b>			
No supervisor appointed			7 (4.7)
One supervisor, strained relationship			7 (4.7)
Changed supervisor			5 (3.3)
Situational supervisor			48 (32.4)
Group supervision			38 (25.6)
One supervisor, good relationship			43 (29.1)
<b>Frequency of supervision (<math>n = 139</math>)</b>			
Not at all			49 (35.3)
1 – 2 times during the course			27 (19.4)
Less than once a week			3 (2.2)
About once a week			6 (4.3)
More often			54 (38.8)

Note:  $n$  vary from the sample due to missing data

Table 9: The hospital ward or clinical unit by clinical speciality

Ward/unit speciality	CLEI		CLES+T N (%)
	Current N (%)	Desired N (%)	
Medical	38 (25.2)	35 (23.2)	37 (24.3)
Surgical	20 (13.2)	19 (12.6)	19 (12.5)
Paediatric	16 (10.6)	16 (10.6)	16 (10.5)
Gynaecological	3 (2.0)	3 (1.98)	3 (2.0)
Oncology	9 (6.0)	8 (5.3)	9 (5.9)
Surgical ICU	6 (4.0)	6 (3.97)	6 (3.9)
Medical ICU	8 (5.3)	8 (5.3)	8 (5.3)
AKU	6 (4.0)	6 (3.97)	9 (5.9)
OT	11 (7.3)	12 (7.95)	12 (7.9)
Recovery Room	5 (3.3)	5 (3.3)	5 (3.3)
Orthopaedic	6 (4.0)	6 (3.97)	6 (3.9)
A&E	9 (6.0)	9 (5.96)	10 (6.6)
Paediatric ICU	2 (1.3)	2 (1.32)	1 (0.7)
ENT	5 (3.3)	4 (2.65)	5 (3.3)
Ophthalmology	5 (3.3)	5 (3.3)	5 (3.3)
Total valid	149 (98.7)	144 (95.4)	151 (99.3)
Missing data	2	7	1
TOTAL	151	151	152

**Note:** A&E: Accident & Emergency department; AKU: Artificial Kidney Unit; ENT: Ear, Nose and Throat ward; ICU: Intensive Care Unit; OT: Operating Theatre

#### 4.10.2 Analysis of findings based on research questions

##### Research Question 1: How do Barbadian student nurses perceive their current learning experience at the Queen Elizabeth Hospital?

Overall the Current CLEI tool had good internal consistency reliability when assessed by Cronbach alpha ( $\alpha = 0.92$ ). Cronbach's alpha for reliability on the subscales within the current CLEI ranged from 0.55 to 0.87. These data suggest that the subscales exhibited between poor through good internal consistency. See Table 10 for internal consistency of current CLEI tool and its subscales. The CLES+T questionnaire internal consistency reliability with the subscale 'total student satisfaction' added was 0.82. For comparison with the original questionnaire (Saarikoski et al. 2008) the subscale 'total student satisfaction' was removed and the overall CLES+T internal consistency was  $\alpha = 0.78$ . This indicates that the CLES+T questionnaire is a good tool overall. Some of the subscales in the CLES+T questionnaire exhibited between good to marginal internal consistency, ranging from 0.78 to 0.96 (Table 11).

Table 10: Current CLEI subscales internal consistency reliability and scores, n = 151 (scores ranging from 1 to 35, high is good)

Actual ward experience		
Areas measured	$\alpha$ - value	Mean (SD)
Personalisation	0.86	23.99 (6.51)
Involvement	0.55	23.86 (4.39)
Satisfaction	0.87	25.74 (6.34)
Task Orientation	0.69	25.62 (4.82)
Innovation	0.60	19.52 (4.76)
Individualization	0.59	19.34 (4.65)

Table 11: Subscales measured in CLES+T tool: subscales internal consistency reliability and scores (ranging from 1 to 5, high is good). *N* =152<sup>a</sup>

Areas measured	$\alpha$ - value	Mean (SD)
Ward atmosphere ( <i>n</i> = 138)	0.90	3.86 (1.17)
Leadership style of the ward sister ( <i>n</i> = 147)	0.86	4.02 (1.05)
Premises of nursing care on the ward ( <i>n</i> = 148)	0.83	4.01 (1.11)
Supervisory relationship ( <i>n</i> = 142)	0.96	3.96 (1.15)
Role of the clinical instructor (CI) ( <i>n</i> = 131)	0.95	3.47 (1.24)
CI enabling integration of theory and practice ( <i>n</i> = 137)	0.95	3.66 (1.16)
Cooperation between ward staff and CI ( <i>n</i> = 136)	0.94	3.40 (1.28)
Relationship between student, nurse and the CI ( <i>n</i> = 135)	0.87	3.38 (1.26)
Students' total satisfaction ( <i>n</i> = 139)	0.78	4.00 (1.19)

<sup>a</sup>Variations in the number of respondents are due to missing data

The mean values for all the subscales of the current CLEI questionnaire are above 17.5 of 35 (see Table 10) and for the CLES+T above 3.00 of 5 (see Table 11). This implies that student nurses viewed their ward experience as good. The subscale student 'satisfaction' scored the highest in the current ward placement (mean = 25.74 of 35 Current CLEI, mean = 4.00 of 5 CLES+T) suggesting that they were satisfied with their ward experience. The next highest scores were for 'task orientation' (mean 25.62 of 35,  $n = 151$ ), 'leadership style of the ward sister' (mean 4.02 of 5,  $n = 147$ ) and 'premises of nursing care on the ward' (mean 4.01 of 5,  $n = 148$ ) according to the different questionnaires. These high scores suggest the student nurses were satisfied with these elements of their ward placement.

Clinical instructor's role was the lowest subscale that student nurses' scored (mean 3.47 of 5,  $n=131$ ). Also, the subscale 'relationship between student nurse, staff nurse and clinical instructor', which describes one of the roles of the instructor on ward placement, scored the lowest overall on the CLES+T questionnaire (mean 3.38 of 5,  $n=135$ ). In relation to the Current CLEI questionnaire, the lowest scores by the students were the subscales 'Individualization' (mean 19.34 of 35) and teaching 'innovation' (mean 19.52 of 35). These low scores may suggest that student nurses perceived these elements as having the lowest contribution to their satisfaction.

*Research question 2: Are there differences between student nurses' perceptions and experiences of their current and desired hospital learning experience?*

This section presents the results for the desired experience. Further, it compares the two sets of findings for the current experience and desired experience according to the CLEI questionnaires data. The current experience results are provided in Table 10. The results for the desired experience are provided in Table 12. Overall the desired CLEI tool is good ( $\alpha = 0.92$ ), however some of the subscales had less internal consistency ( $\alpha = 0.60$  to  $0.82$ ). See Table 12 for internal consistency of desired CLEI tool.

In relation to their ideal learning environment, student 'satisfaction', 'task orientation' and 'personalisation' were the three subscales that students' scored the highest (mean 30.74 of 35; mean 29.98; mean 29.26, respectively). These high scores suggest that students desired these elements on ward placement. The 'Individualization' subscale was rated the lowest among all the subscales in the desired ward experience (mean 25 of 35).

Table 12: Desired CLEI subscales internal consistency reliability and scores (ranging from 1 to 35, high is good),  $n = 147$

Desired Ward Experience		
Areas measured	$\alpha$ - value	Mean (SD)
Personalisation	0.76	29.26 (4.97)
Involvement	0.65	28.33 (4.47)
Satisfaction	0.82	30.74 (4.50)
Task Orientation	0.71	29.98 (4.18)
Innovation	0.62	25.19 (4.92)
Individualization	0.60	24.31 (4.86)

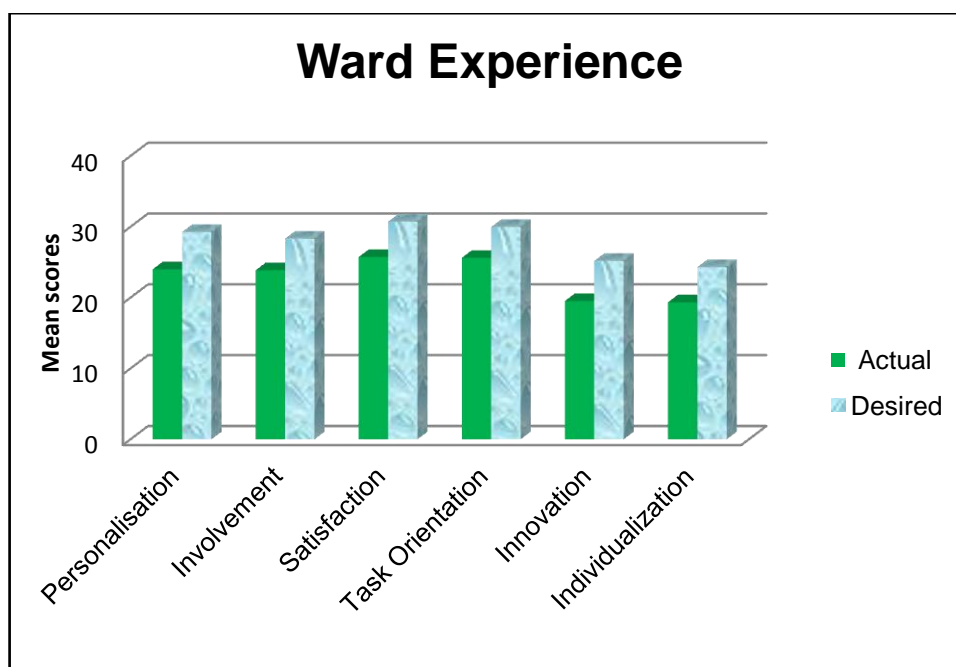
The comparisons of the two sets of findings for the current and desired experience showed that the student nurses rated the desired experience more than the current experience in all the subscales within the CLEI questionnaire (see Table 13). Figure 6 is a schematic representation of the differences of the mean scores on the actual and desired experience based on the two versions of CLEI questionnaire (current and desired).



Table 13: Differences in median scores (1 to 35) between current and desired domains of CLEI questionnaire using Wilcoxon ranks-sum test ( $n=147$ )

Area measured	Median score		Median difference	Wilcoxon signed ranks z - value	p-value
	Current	Desired			
Personalisation	25	30	5	6.68	0.000
Involvement	24	28	4	7.76	0.000
Satisfaction	27	32	5	7.03	0.000
Task Orientation	27	31	4	7.34	0.000
Innovation	19	25	6	8.07	0.000
Individualization	20	25	5	7.63	0.000

Figure 6: Differences in mean scores (1 to 35) between the actual and desired forms of the CLEI questionnaire



A Wilcoxon signed-ranks test indicated student nurses ( $n = 147$ ) expected the assigned ward to have more 'personalisation', 'involvement', 'satisfaction', 'task orientation', 'innovation' and 'individualization' than the actual experience,  $z = 6.68$  to  $8.07$ ,  $p = 0.000$  (see Table 13). Teaching innovation made a statistically significant difference to the student nurses learning experiences, median scores difference = 6;  $z = 8.07$ ;  $p = 0.000$  ( $n = 147$ ) (see Table 13). The subscale 'personalisation' showed the lowest statistically significant differences between student nurses' current and desired learning experience ( $z = 6.68$ ,  $p = 0.000$ ,  $n = 147$ ).

*Research Question 3: Is there a relationship between satisfaction among nursing students at the Barbados Community College and their current learning experience at the Queen Elizabeth Hospital?*

The different questionnaires (Current CLEI and CLES+T) indicated the subscales 'personalization' ( $\rho = 0.72$ ,  $p = 0.000$ ,  $n = 151$ ) and 'supervisory relationship' ( $\rho = 0.84$ ,  $p = 0.000$ ,  $n = 110$ ) have the strongest positive correlation with student satisfaction. The next highest statistical positive correlation demonstrated was in student 'involvement' ( $\rho = 0.70$ ,  $p = 0.000$ ). The positive relationship means that in general, satisfied nursing students tend to have higher scores in supervisor-student interaction (i.e., supervisory relationship and personalization) and involvement in clinical activities, especially interpersonal relationship. These same elements would score the lowest by dissatisfied students. See Table 14 and Table 15 regarding relationship with student satisfaction and other factors on the different questionnaires.

'Cooperation between ward staff and clinical instructor' did not determine students' satisfaction ( $\rho = 0.18$ ,  $p = 0.63$ ,  $n = 110$ ). 'Individualization' ( $\rho = 0.50$ ,  $p = 0.000$ ,  $n = 151$ ) and the 'Role of the clinical instructor' ( $\rho = 0.35$ ,  $p = 0.000$ ,  $n = 110$ ) had the lowest statistically significant positive correlation with student satisfaction. It suggests that in general, satisfied students tend to score the instructor's role and 'Individualization' lower and dissatisfied students even lower.

Table 14: Comparison of satisfaction with the other subscales within the Current CLEI scale using Spearman rho (n = 151)

Areas measured	<i>rho</i> - statistics	p - value
Personalisation	0.72	0.000
Involvement	0.70	0.000
Task Orientation	0.68	0.000
Innovation	0.57	0.000
Individualization	0.50	0.000

Table 15: Comparison of satisfaction with the other CLES+T subscales using Spearman rho (n = 110)

Areas measured	<i>Spearman rho</i> - statistics	<i>p</i> - value
Ward atmosphere	0.79	0.000
Leadership style of the ward sister	0.59	0.000
Premises of nursing care on the ward	0.70	0.000
Supervisory relationship	0.84	0.000
Role of the Clinical Instructor (CI)	0.35	0.000
CI enabling integration of theory and practice	0.26	0.000
Cooperation between ward staff and CI	0.18	0.63
Relationship between student, nurse and the CI	0.39	0.000

The Kruskal-Wallis one-way analysis variance test on the Current CLEI data demonstrated no statistically significant difference between the groups from age ( $\chi^2 (3, n = 151) = 3.41, p = 0.33$ ); gender ( $\chi^2 (1, n = 151) = 0.00, p = 0.97$ ); or level of study ( $\chi^2 (1, n = 151) = 1.04, p = 0.31$ ) on student satisfaction. Also, there was no statistical significant difference between the two groups in previous nursing-related work experience on student satisfaction ( $\chi^2 (1, n = 150) = 0.28, p = 0.59$ ).

Kruskal-Wallis test on the CLES+T questionnaire data also demonstrated no statistically significant difference in student satisfaction and student's age ( $\chi^2 (3, n = 151) = 0.61, p = 0.90$ ); gender ( $\chi^2 (1, n = 139) = 3.27, p = 0.71$ ); level of study ( $\chi^2 (1, n = 139) = 2.17, p = 0.14$ ); previous nursing-related work experience ( $\chi^2 (1, n = 139) = 0.01, p = 0.94$ ); or supervisor's title ( $\chi^2 (3, n = 127) = 2.69, p = 0.44$ ). The findings suggest no evidence of age, gender, previous related-work experience, level of study or supervisor's title on student's satisfaction.

The Kruskal-Wallis test demonstrated a statistically significant difference in student satisfaction on different ward types across the different questionnaires, Current CLEI:  $\chi^2 (14, n = 149) = 49.69, p = 0.000$  and CLES+T:  $\chi^2 (14, n = 138) = 45.14, p = 0.000$ . Since the overall Kruskal-Wallis test was significant, the Mann-Whitney statistical test was performed to determine the ward types on satisfaction. The results of this test demonstrated that student nurses on the medical wards were more satisfied with their experience (Current CLEI median = 25 of 35,  $n = 38$  ; CLES+T median = 3.67 of 5,  $n = 33$ ) than students allocated to the ophthalmology ward (Current CLEI median = 14 of 35,  $n = 5$ ; CLES+T median = 2.00 of 5,  $n = 5$ ),  $U = 27.00, z = -2.58, p = 0.01, r = 0.39$  (Current CLEI) and  $U = 34.00, z = -2.112, p = 0.04, r = 0.34$  (CLES+T). The typical or medium strength of the relationship means the ward types may be practically important in clinical nurse education. The data should be interpreted carefully because the samples of nursing students in the survey study were unequal (i.e., violation of the assumption of equal variances).

In addition, the data demonstrated that student nurses who experienced more supervision had greater satisfaction ( $n = 51$ , median 2.80 of 5) than student nurses who had no supervision on the ward ( $n = 45$ , median 2.20 of 5),  $U = 507$ ,  $z = -4.82$ ,  $p = 0.000$ ,  $r = 0.49$ . The typical or medium strength of the relationship means the frequency of supervision may be practically important in clinical nurse education.

*Research Question 4: Is there a relationship between satisfaction among nursing students at the Barbados Community College and their desired experience at the Queen Elizabeth Hospital?*

In the ideal learning environment, the Spearman rho correlation test demonstrated that the subscale 'task orientation' had the strongest statistical positive relationship with student satisfaction ( $\rho = 0.75$ ,  $p = 0.000$ ,  $n = 147$ ), see Table 16. This strong relationship suggests students desired more order and organised ward tasks. The subscale 'Individualization' had the lowest statistically significant relationship with student satisfaction ( $\rho = 0.45$ ,  $p = 0.000$ ,  $n = 147$ ).

Table 16: Comparison of satisfaction and other domains (Desired CLEI form) using Spearman rho ( $n = 147$ )

Areas measured	$\rho$ - statistics	p - value
Personalisation	0.69	0.000
Involvement	0.67	0.000
Task Orientation	0.75	0.000
Innovation	0.56	0.000
Individualization	0.42	0.000

#### **4.11 Discussion of survey findings**

Generally, student nurses rated their assigned clinical unit as a good experience based on the questionnaire data. However, their current experience was different from what they actually desired. This section will discuss the results of the questionnaire study under the following sections: questionnaires' internal consistency, students' clinical unit placement experience, mismatch between current and desired ward learning environment, and relationship between students' satisfaction and learning experience.

##### **4.11.1 Questionnaires' internal consistency reliability**

The internal consistency was determined by the Cronbach's alpha. The CLES+T questionnaire data revealed similar alpha values to the original questionnaire (Saarikoski et al., 2008) and other countries studying the hospital settings (Johannson et al., 2010; Warne et al., 2010; Henriksen et al., 2012, Bergjan & Hertel, 2013). This suggests the CLES+T questionnaire can be considered a useful tool for use in nurse training, to audit the quality of the hospital setting for student nurses' learning within the Barbadian context.

With respect to the CLEI, both the current and desired questionnaires had good internal consistency reliability overall. Notably, some of the domains had Cronbach's alpha values of less than 0.6 in the current questionnaire compared to the desired tool. Chan and Ip (2007) and Perli and Brugnolli (2009) showed lower values in some areas of the current CLEI form. The present study and the Italian study by Perli and Brugnolli (2009) showed some improvements in the internal consistency in the desired CLEI questionnaire. In the Hong Kong study, Chan and Ip (2007) reported a poor to good internal consistency in the desired CLEI questionnaire ( $\alpha = 0.51$  to  $0.71$ ). Perli and Brugnolli (2009) suggested that the low internal consistency reliability may be due to the heterogeneous sample group of their study. The original tool was tested on a homogenous group of second year student nurses (Chan, 2003) while the present study collected data from second and third year student nurses.

Factor analysis of the CLEI on a sample of second and third year student nurses in Australia revealed different factors compared to the original tool (Newton et al., 2010). Newton et al. (2010) concluded that the new factors identified in the CLEI were better suited to measuring the clinical learning experiences of a heterogeneous group of student nurses in nurse training, concurring with the views advocated by Perli and Brugnolli (2009).

Another explanation for a low internal consistency in the subscales 'involvement' and 'individualization' (current) may be the negatively worded items found in these subscales. These items are scored in the reversed manner when compared to the positive response items. Student nurses may experience problems in interpreting the subscales' items which were negatively worded. Also, the items in the 'involvement' subscale (current) reflect different features of student involvement which have not correlated well with each other. In addition, some items may have better captured the experience of student nurses in Barbados than others.

#### **4.11.2 Students' ward or unit placement experience**

In this study, the ward sister was identified as very important for nursing students to have a good ward experience. This concurs with earlier studies conducted in the United Kingdom (Fretwell, 1980; Ogier, 1981; Wilson-Barnett et al., 1995) and Australia (Dunn & Hansford, 1997). In those studies the ward sister created a supportive ward environment for student learning as well as clinical teaching and supervisory responsibilities (Bezuidenhout, Koch & Netshandama, 1999, O'Driscoll, Allan & Smith, 2010). Later studies reported that the ward sister, referred to as ward manager (Saarikoski & Leino-Kilpi, 2002), has limited supervisory responsibilities in regards to student nurses' clinical learning (Saarikoski & Leino-Kilpi, 2002; Johansson et al., 2010; Bergjan & Hertel, 2013). The literature suggests that the decline in the clinical teaching and supervisory responsibilities of the ward sister maybe due to the establishment of mentorship (sometimes known as preceptors), student nurses' new supernumerary status, and the development of various clinical

supervisory models in nurse training (Lambert & Glacken 2004; Chesser-Smyth, 2005; Pollard, Ellis, Stringer & Cockayne, 2007). In the current study, it is possible that the large student nurse population on the wards might have resulted in the ward sisters in Barbados having increased supervisory responsibilities rather than solely administrative responsibilities.

Student nurses rated satisfaction as very important to their current learning in CLEI (current form) and CLES+T tool. This is similar to survey studies conducted in some developed countries using the CLEI questionnaire (Henderson et al., 2006; Midgley, 2006; Perli & Brugnolli, 2009). These earlier survey studies found overall the highest score was in student satisfaction (Henderson et al., 2006; Midgley, 2006; Perli & Brugnolli, 2009). In an Iranian questionnaire survey study, the majority of the student nurses had a bad clinical placement experience, particularly in the areas of personalisation, teaching innovation, and individualization (Rahmani et al., 2011). The reason for high student nurse satisfaction scores in the present study is unclear. It is possible that the student nurses were appreciative of the clinical experience to practice in real life situations.

From a global standpoint, nursing is considered a practice-oriented profession (Pearson, Vaughan & FitzGerald, 2005; Potter et al., 2013). It is understandable therefore that student nurses in Barbados may rate the subscale 'premises of nursing care on the ward' as greatly informing their current learning. This result concurs with Cypriot student nurses' views of their hospital placements (Papastavrou et al., 2010). Papastavrou et al. (2010) concluded that the delivery of nursing care and patient relationships influenced the student nurses learning experience. A review by Henderson et al. (2012) of student nurses' perceptions of the clinical learning environment, found that student nurses placed great emphasis on clarity of ward activities. The findings in Henderson's et al. (2012) review are similar to the present study. In the current quantitative study, student nurses in Barbados experienced clear well-organised practical tasks (Task orientation) and expected similar activities on the wards. Nursing staff might have viewed clinical competency as being



proficient in practical skills. However, reference to practical ward tasks in the present study may have been used in a broader context to encompass the various components of nursing practice rather than practical skills competencies in the main (Hughes & Quinn 2013). In other words, learning practical skills may have been viewed by the students from the context of nursing care in general. Educators should ensure that student nurses understand the importance of learning practical skills in the context of nursing care.

The current data showed that 'innovation' might be considered as a bad experience, because student nurses rated the subscale low in comparison to most other subscales on both versions of the CLEI questionnaires (Current and Desired). Nevertheless, the data also showed that the teaching and learning strategies provided by the supervising registered nurse were generally appropriate and effective to learning because the mean score was above 17.5. However, student nurses in Barbados reported that they wanted the nursing staff to provide more innovative ways of teaching in the wards. Chan (2001b) states the 'innovation' scale assesses the "extent to which the [supervising qualified nurse] plans new, interesting and productive ward experiences, teaching techniques, learning activities and patient allocation" (p.450). Student nurses in different cultural and hospital settings were less informed by the teaching and learning strategies demonstrated by the nursing staff, and desired more innovative strategies, based on studies using the same instrument (CLEI) (Chan 2001a; Ip & Chan 2005; Smedley & Morey, 2010; Alraja, 2011; Papathanasion et al., 2014). This suggests that the teaching abilities of the supervising registered nurse may not be a strong feature in Barbados. Professional nurses in Barbados need to be made aware of student nurses' views regarding teaching and learning strategies by qualified nurses. The development of continuing professional development programmes, which facilitate nursing staff in developing novel ways of teaching, may prove a useful method in this regard.

In Barbados, supervision by clinical instructors employed by the college is a common practice during the practice rotation of student nurses. In the current study, student

nurses reported a good experience regarding the role of the clinical instructor on the ward. However the subscale achieved the lowest score (mean 3.47) compared to the clinical learning environment (i.e., ward atmosphere, ward sister and nursing care) and supervisory relationship. The low score of the clinical instructor subscale is in line with Warne et al.'s (2010) finding among a European sample of student nurses using the same instrument. Perhaps the low score can be attributed to the instructor's role shifting from a direct supervisory role to an indirect one and the instructor functions more as a liaison between the college and hospital (Warne et al., 2010). Norwegian student nurses reported experiencing more direct supervision from the clinical instructors than nursing staff (Löfmark et al., 2012). From a Barbadian perspective, the low score for the role of the clinical instructor subscale may be attributed to the limited number of instructors being able to supervise the large student nurse population (Sealy, 2009).

Based on the quantitative data, the 'relationship between the student, supervising registered nurse and clinical instructor' was generally good (mean 3.38 out of 5). However, student nurses rated this subscale lower than other subscales under the heading 'role of the clinical instructor'. The reduced sample size ( $n = 135$  out of 152) perhaps indicates that some student nurses may have experienced difficulty in identifying with the items in the subscale on the assigned ward placement. It must be emphasized that the student, supervising staff nurse, and clinical instructor each have different roles within the relationship (Saarikoski et al., 2009). The supervising staff nurse is the expert on the ward, while the instructor applies classroom theory to practice. The student nurse in turn is the recipient of learning. In the Saarikoski et al. (2009) study, Finnish student nurses rated the relationship between student nurse, the mentor and nurse educators higher than the Barbadian sample in the present study. This may be due to differences in the role of the clinical instructor in the Finnish and Barbados nurse training systems. From observation, the clinical instructors in Barbados seem to have direct supervisory roles. In Finland the clinical instructors have an indirect supervisory role but more of a liaison role (Saarikoski et al., 2009). Other possible explanations include (a) the Barbadian sample may not clearly understand the role of the instructor in clinical placement, and (b) students

perceive the role of the clinical instructor differently from that of the instructor. It would be interesting to know how clinical instructors view their role in student learning.

#### **4.11.3 Mismatch between current and desired ward learning environment**

The present study sought to determine whether student nurses' current learning experience varied from what students wanted. The current and desired forms of the CLEI questionnaire were compared to test whether a 'fit' existed. The Desired CLEI data demonstrated higher median scores compared with the corresponding current CLEI data. In addition, statistically significant differences between current and desired experiences among all the CLEI subscales were found in the present study. This suggests Barbadian student nurses desired positive changes on the wards to enhance their learning experience. The present data are consistent with international studies using the same instrument in the discipline of nursing (Chan 2001a; Ip & Chan 2005; Midgley, 2006; Smedley & Morey, 2010; Papathanasiou et al. 2014). The findings indicate a general consensus across different cultural settings. Entry-level student nurses demand more from clinical placement in comparison to what is actually received.

The data indicates that there is no 'person-environment fit' (Fraser & Fisher, 1983a) between the current and desired ward settings. It is important for clinical instructors to be aware of students' actual learning experience and how it differs from what students would like to experience (Midgley, 2006). Furthermore, Chan (2001a) suggested enhancing student nurses' placement experiences by attempting to align the real ward setting with student expectation. It would be interesting to see how clinical nursing staffs view the actual environment and the desired ward environment, in the context of students' clinical learning. Further research could compare nursing staff and student nurses perceptions of the actual and desired ward environments, in regard to clinical nurse training.

Some educators believed that alignment of current and desired learning experiences in the practice setting would not necessarily allow greater opportunity for learning and better clinical learning experiences (Fraser & Fisher, 1983b; Brown et al., 2011; Williams, Brown & Winship, 2012). This view is reflected in the present data. None of the domains in the Desired CLEI questionnaire achieved the maximum score of 35, suggesting that students did not believe that it was practical for the ward placement to be truly what they would like it to be. Smedley and Morey (2010) underscore this view, in reference to their Australian quantitative study on a sample of senior bachelor degree student nurses. Nurse educators cannot assume that the ideal setting could be completely moulded into the actual placement experience in terms of the context of learning. Rather, there is a need to ensure that student nurses are aware that not all wards are the same and would not totally be consistent with their expectations in every particular.

There was similarity between the current and desired CLEI corresponding domains in terms of the order of priority. In both the current and desired learning experiences, the greatest priority was placed on the personal development features. Students' satisfaction and task orientation subscales were top priorities. It is interesting to note that student nurses desired more clarity of ward activities, i.e., clear, well organised ward activities, compared to focusing on patient-orientated nursing. The students expected these attributes in their ideal ward setting. This suggests student nurses were not satisfied with the current level of task orientation on the wards/units. Perhaps students felt more competent handling designated tasks than handling patients, which requires additional competencies and judgement to the technical skills of changing dressings. The act of changing dressings requires patient interaction.

The subscale 'personalisation' emerged as being also important to how student nurses would like the unit to be. This domain focuses on the relationship aspect of placement and suggests that the ward nurses were significant in fulfilling the student nurses' personal growth as a nurse. Kaphagawani and Useh (2013) literature review

on nursing students' clinical experiences found that a good registered nurse-student nurse relationship facilitates greater learning opportunities and poor relationships compromise supervision. The subscale 'personalisation' demonstrated the lowest statistically significant differences between the current learning experience and desired experience. It suggests either students did not expect much improvement in terms of the interaction with the supervising registered nurse, or the students' actual and desired perceptions of the interaction were relatively close.

The subscales 'individualization' and 'innovation' had the lowest median scores in the desired ward experience. The fact that 'individualization' had the lowest statistically significant association with student satisfaction in the desired experience, makes it less of a concern. Chan (2001a) placed 'individualization' and 'innovation' under Moos' (1983, cited by Chan 2001a, p.629) System Maintenance and System Change. System maintenance and system change relate to the order and clarity of the psychosocial environment and its response to change. First, the data implied that student nurses did not welcome being treated on an individual basis and making decisions. This finding concurs with other studies (Chan 2001b; Smedley & Morey 2010; Papathanasiou et al. 2014). Henderson et al. (2012) argued that the student nurse may perceive of themselves as unable to influence patient care delivery due to their student status. The healthcare hierarchical structure may also further reinforce a decreased sense of contribution to changes in practice. Thus, clinicians need to encourage greater student participation, inclusive of the decision-making process in the context of patient care.

Although the student nurses in Barbados wanted improvements in all elements of the CLEI questionnaire, they desired more with respect to teaching 'innovation'. Survey studies by Chan (2002b), Ip and Chan (2005) and Alraja (2011) also reported the lowest mean scores in both the current and desired clinical experiences. This suggests that student nurses in different cultural nurse training contexts expect less in regard to teaching methods by the qualified nurses. The Barbadian student nurses expected more improvements in this area. Nursing administrators need to foster a

culture of teaching on the wards. Nurse tutors and instructors from the community college could collaborate with the hospital to educate qualified nurses on novel and effective teaching methods.

#### **4.11.4 Relationship between students' satisfaction and clinical learning experience**

The findings from the present study (Study 1) support the literature that multiple elements affect student satisfaction (Dunn & Burnett 1995; Papp et al., 2003). In the Barbadian context, the three top features of the students' current placement which contributed to a satisfied learning experience were 'personalization', student 'involvement' and 'supervisory relationship'. The terminology between the subscales personalization and individualisation differ. The Personalization subscale measures the extent of student engagement with the staff nurse who demonstrates concern for the student's welfare (Chan, 2003). The Individualisation subscale measures whether student nurses are allowed to make decisions and whether the students are treated differently based on their ability or interest demonstrated on the ward (Chan, 2001a). In regard to the desired experience, student nurses in Barbados expected much more participation in practical tasks in order to be satisfied with their ward experience.

A possible mediating variable in the student satisfaction and supervisory relationship might be found in the number of supervisions. Student nurses who had frequent supervision described being more satisfied with their placement experience than unsupervised students, concurring with European studies (Warne et al. 2010). The fact that some student nurses were unsupervised on placement is a worrisome issue, which seems to be an international phenomenon (Papastavrou et al., 2010; Warne et al., 2010). Student nurses being left unsupervised on the ward is an issue which needs to be addressed by educators and administrators.

Findings in the present study demonstrated a positive statistically significant correlation between satisfaction and the clinical instructor's role in applying theoretical knowledge on the ward, and the instructor relationship with students and supervising nurse. This is significant given the fact that in the current experience student nurses described their experience to be less informed by the student engaging with the registered nurse and instructor. These findings support the argument for the presence of the clinical nurse instructor from the college on student placements (Gillespie & McFetridge, 2006; Saarikoski et al., 2009).

No statistically significant link was found between 'cooperation between the ward staff and clinical instructor' and students' satisfaction. The role of the instructor from the college as a team player and sharing his/her expertise with the ward staff did not appear to influence a good or bad ward experience. Previous research findings reported low mean scores in the same scale, 'cooperating between placement staff and nurse teacher' (Johansson et al., 2010; Saarikoski et al., 2009; Warne et al., 2010). It indicates that the clinical instructor has no direct teaching responsibilities to the wards nursing team in order to enhance students' learning (Carlson & Idvall, 2014). It also implies that the role of the clinical instructor on students' clinical placement is still unclear.

### **Study limitations**

There are several limitations to this questionnaire study. The results are limited to the population surveyed. It would be interesting to see whether student nurses' views of the hospital placement change over time as they progress through their studies at the college. Another limitation of the questionnaire study is that the data are unable to provide causal relationships for student satisfaction with their current learning and desired placement experience, nor provide the reasons why the student nurses rated the information as they did. Qualitative interviews could provide the depth of information and explanations of the quantitative findings.

#### **4.12 Chapter summary**

This chapter presented a cross-sectional study across a cohort of second and third year student nurses at the community college in Barbados. The purpose was to examine the cohort of student nurses views regarding their practical training at the Queen Elizabeth Hospital, Barbados. The CLEI (current and desired forms) and CLES+T questionnaires were used to measure the students' views. Overall, the instruments' internal consistency was good. However, some items in the CLEI (current and desired forms) questionnaire had less than good internal consistency. Although the literature noted the decreased supervisory responsibilities of the ward sister in students' clinical learning, the present study argues that ward sisters are still relevant, in the context of learning.

In a Barbadian context, the features that constitute a good learning experience are student nurses' participation in clear, well organised practical skills, efficient nursing care, positive student-supervisor interactions, and nursing staff's willingness to supervise the students. Teaching innovation, Individualization and the role of the clinical instructor subscales less described the ward experience and student satisfaction. Furthermore, the real ward setting differed from what nursing students actually desired while on placement. The presence of the clinical instructors on placement is important, but their roles need further clarification. Personal development and relationship categories of Moos' human environment theory were central psychosocial features of the hospital wards. The next chapter presents the approach and discusses the findings of the qualitative study (Study Two). Semi-structured interviews were undertaken in order to examine students' rationale for rating their experiences.



## **Chapter Five: Study Two - Qualitative Method, Findings and Discussion**

### **5.1 Chapter overview**

The previous chapter presented the questionnaire survey and discussed the results (study one). Based on the findings from the survey data, a qualitative research study was performed to give greater understanding of and to explore the student nurses' perceptions of the hospital learning environment. This chapter presents the qualitative research and interview findings. The chapter is structured as follows: a summary of the questionnaire results, the rationale for the use of thematic analysis, study aims and research question, recruitment and study sample, interview guide, data collection, data analysis, ethical considerations, the issues relating to methodological rigour, reflexivity, findings, and discussion of the qualitative data.

### **5.2 Summary of study one questionnaire findings**

The findings from the questionnaires on student nurses' perceptions of the hospital ward/unit placement were:

- Generally, the experience on the hospital ward or unit was good.
- The current learning was mainly informed by students' 'satisfaction', 'task orientation', 'leadership style of the ward sister' and 'premises of nursing care'.
- Current learning was less informed by the supervising nurse's teaching skills (innovation), relationship between student nurse, supervising nurse, and clinical instructor, and individualization. Student nurses believed 'individualization' would have less informed their learning in their ideal ward situation.
- The current ward experience differed from what students would like to see on placement.
- In the current experience, satisfied students were more informed by the following: the increased interaction with the supervising nurse who showed

concern for their personal welfare (personalization), a good student-nurse relationship (supervisory relationship), and more participation in ward activities (involvement). However, satisfied students desired the ward to have more clearer and orderly activities (task orientation).

- Satisfied students were less informed by 'individualization' in both the current and desired experience.
- The supportive and advisory roles of the clinical instructor and being a team player on the ward (cooperation between the ward staff and clinical instructor) did not determine students' satisfaction in their current learning.

### **5.3 Adopting a thematic analysis stance**

A pragmatic approach was taken to select an appropriate analytical method for study two (Harper, 2012). Pragmatism is a philosophy (Creswell & Plano Clarke, 2011; Morgan, 2007). Pragmatists believe: (1) truth is based on what is observed and measurable (objective reality) and multiple perspectives exist (socially constructed reality), (2) knowledge is drawn from integrally linked objective and subjective data, and (3) the research process is guided by the research question(s) and the purpose of the research (Doucet, Letourneau & Stoppard, 2010; Mollard, 2015).

One limitation of the quantitative study (Study 1) was its inability to explore the reasons for the participants' responses. Therefore, for Study 2, an inductive thematic analysis was chosen to generate emerging patterns (themes) from the qualitative data (Braun and Clarke, 2006). Using predetermined concepts from the questionnaire results to guide the analysis of the qualitative data, termed 'deductive thematic analysis' (Burnard et al., 2008), would have provided specific aspects of the experience. However, deductive thematic analysis would not have provided a complete understanding of the practice experience (Braun & Clarke, 2006). Instead, themes are generated from the interview data (inductive) (Braun & Clarke, 2006). From a pragmatic approach, the two studies (study 1 and 2) were integrally linked with both being important for different reasons.

Phenomenology is the term for identifying commonalities in how student nurses describe ward placement experience (Starts & Trinidad, 2007). However, it would have been difficult to bracket one's views of the students' practice experience, due to my clinical educator role and thus purist phenomenology was not selected. Discourse analysis was not chosen because this qualitative study focuses on the student nurses' practice placement learning experience, rather than the language used to describe the learning experience (Hodges, Kuper & Reeves, 2008). It would have been interesting to observe the student nurses' behaviours and interactions within the hospital setting, to understand their experience more fully. However, due to time constraints an ethnographical approach was not selected. Furthermore, it was not believed that one could become 'immersed' in the ward culture without impacting on the student nurses' behaviour due to my role as an educator (Williams, 2008; Polit & Beck, 2014). The primary purpose of grounded theory is to generate a theory that is inductively derived from the qualitative data to explain a phenomenon (Glaser & Strauss, 1967) but developing an inductive theory to explain the quality of the ward experience was not the purpose of this qualitative study.

For this study, inductive thematic analysis was informed by Critical Realism (Bhaskar, 2008). Critical Realism is a term to describe:

“...the ways individuals make meaning of their experience, and, in turn, the ways the broader social context impinges on those meanings, while retaining focus on the material and other limits of ‘reality’” (Braun & Clarke 2006, p.81).

Therefore, this study focused on describing the experience on the hospital units from the students' perspective and how it was socially constructed (Sayer, 2000; Braun & Clarke, 2006). Knowledge was drawn from the student nurses' practice experience on the hospital unit/ward by the analysis staying close to the interview data (intransitive knowledge), and relating the data to previous literature (transitive knowledge) (Bhaskar, 1998; Sayer, 2000; Bergin, Wells & Owen, 2008).

Critical realists believe that reality (e.g. hospital ward) is made up of three domains: real, actual and empirical (Bergin et al., 2008; Bhaskar, 2008). The 'real' domain entails the factors referred to as 'generative mechanisms' (i.e., structures, agents, and relations) creating the student nurses' experience and outcomes. The 'actual' domain is the experience and outcomes created by the factors, whether the student nurses are aware of them or not, while the 'empirical' includes only the experiences and outcomes the student nurses are aware of (Bergin et al., 2008; Bhaskar, 2008; Harwood & Clarke, 2012). Therefore, a critical realist stance would not only explore how the students interpret their reality (i.e. the ward) or outcome (student satisfaction), but the discovery and exploration of factors (generative mechanisms), such as leadership of the ward sister and task-oriented nursing care, that exert an influence on the students' experience and outcome.

#### **5.4 Study two aims and question**

This qualitative study aimed to provide a description of:

1. The student nurses' perceptions of their experience at the Queen Elizabeth Hospital.
2. The outcomes of those experiences.
3. The possible generative mechanisms (factors) that could connect experience and outcomes.

The study sought to address the following question, "How do student nurses make sense of their hospital learning experience?"

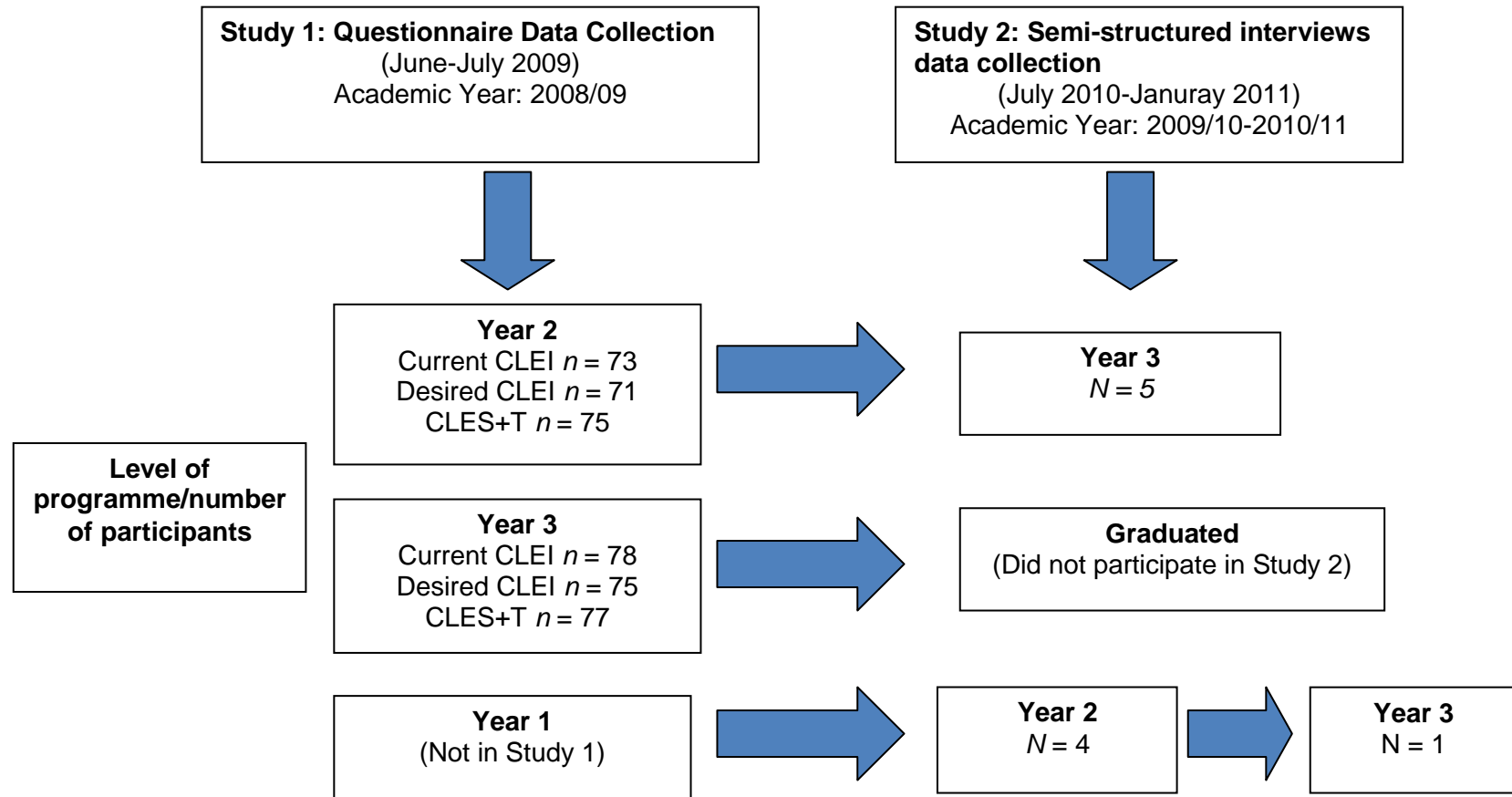
#### **5.5 Recruitment and study sample**

All current second and third year student nurses on placement were targeted. First year student nurses were not eligible for study 2 because they were not on clinical placement. Current third year student nurses had participated in study 1 when they were second year students. Current second year student nurses did not participate

in the questionnaire survey (Study 1) the previous year because they would have been in first year at that time. The third year participants in Study 1 had graduated and left the college and therefore could not be followed-up. The questionnaires were anonymous making it difficult to determine which former third year student participated in the survey. Another issue arising in following up previous participants of the questionnaire survey study (Study 1) after graduation was the inability to locate students and determine where they were employed in the various healthcare institutions locally or overseas. It is common practice for some students to change addresses and phone numbers. Due to the duration of time between both studies, the graduates may experience difficulty recalling their learning experiences. There is also the possibility of recall bias (their last assigned ward placement at the hospital may impact previous experiences on other wards). Thus the finding may be biased. See Figure 7 for the time line of data collection of research study.

Potential participants were approached by a colleague from the Nursing Department and given a participant information sheet (see Appendix K). If they were interested in participating, they were invited to contact the researcher directly to arrange an interview date. Written consent was obtained prior to conducting the interview (see Appendix L). Participants would have been recruited until data saturation was achieved. Thus, sampling of the student nurses and data collection ceased when no more new patterns and themes emerged from the data, this is referred to as data saturation (Bryman, 2012). Data saturation is a criteria guide used by qualitative researchers to determine if the quality of the data (as opposed to the quantity of the data) adequately answers the research question (O'Reilly & Parker, 2013). The number of the student nurses (sample) is more reflected on how well the data appropriately validates the research question based on common patterns using the concept data saturation (O'Reilly & Parker, 2013). This differs from the quantitative research emphasis of generalisation of findings through a large sample to validate the data (Bowen, 2008; Bryman, 2012). There is a lack of consensus among qualitative researchers on an acceptable sample size to support data saturation claims (Marshall, Cardon, Poddar & Fontenot, 2013). A proposed sample of 12 participants was deemed an appropriate number for interviews because data

Figure 7: Timeline of data collection of mixed-methods research project



saturation commonly occurs within the first twelve interviews (Guest, Bunce & Johnson, 2006). In the current study it was evident that common themes had reached saturation by the tenth participant, therefore gathering of data was stopped since there were no new patterns emerging. Some student nurses refused to participate with one student stating that she did not like participating in interviews. Student nurses were added to the sample until no new coding information emerged from the data (Haber, 2014).

## **5.6 The interview guide**

An interview guide was created based on the questionnaire survey responses (see Table 17). The guide was comprised of open-ended questions which allowed for some structure to the interviews but was flexible enough to freely probe responses, if necessary. Participants were involved in the control of the direction and content of the interview, while discussing their salient practice experiences. A pilot study was undertaken with two participants to explore the appropriateness of the questions within the interview guide and this revealed no need for revisions of the interview guide. King and Horrocks (2010) suggested revision of the interview guide during the course of the research so that subsequent interviews can be informed by information gathered from the analysis of the first few interviews. After analysis of eight student nurses' responses during the course of the data collection process, three additional questions were added to the interview guide (see Table 18). They allowed for further elaboration of emerging themes but seemed anecdotal, as there was no new information.

Table 17: Initial interview topic guide

<p align="center"><b>Nursing students' experiences of their acute hospital clinical placement</b></p> <p><u>Student Information</u></p> <p>Age:</p> <p>Male/Female:</p> <p>Level of study:</p>	
<p><b>Individual Semi-Structure Interview Guide</b></p>	
1	Ensure tape recorder works, and will pick up the participant's voice
2	Introductions
3	Explain purpose of the interview is to explore experiences of the clinical placement and their ideal clinical environment
4	Obtain written consent
5	Explain ground rules: <ul style="list-style-type: none"> <li>• Confidentiality of what is said in the interview</li> <li>• The transcripts will be anonymous and any quotes used will be anonymous</li> </ul>
6	<b>Don't forget to SWITCH THE TAPE-RECORDER ON now</b>
7	Focus the student's thoughts by reading out the statement below.
<p><b>Think about your recent clinical placement at the Queen Elizabeth Hospital.....</b></p> <ol style="list-style-type: none"> <li>1. Can you tell me which specialty you did your clinical placement?</li> <li>2. Could you tell me about your experience on the ward, both the good and the bad?</li> <li>3. What did you enjoy or like about your clinical placement?</li> <li>4. What did you dislike about your clinical placement?</li> <li>5. Do you feel this was a good learning experience? Why would that be?</li> <li>6. Tell me about the people around you – the ward sister, your supervisor, the clinical instructor – how did they contribute to your learning experience on the ward?</li> <li>7. If you could imagine working in a ward that had an ideal learning environment, please describe what would it be like?</li> <li>8. What would it feel like to be working in such a place?</li> <li>9. Is there anything else you would like to discuss about your learning experience on the clinical placement?</li> </ol>	
<p><b>This is a topic guide, please use general prompts below to help clarify what students say</b></p>	
<p><b>General prompts</b></p> <p>Can you give me an example?</p> <p>Can you explain that a bit more?</p> <p>What did that feel like?</p>	



Table 18: Revised interview topic guide

<p align="center"><b>Nursing students' experiences of their acute hospital clinical placement</b></p> <p><u>Student Information</u></p> <p>Age:</p> <p>Male/Female:</p> <p>Level of study:</p>	
<p align="center"><b>Individual Semi-Structure Interview Guide</b></p>	
1	Ensure tape recorder works, and will pick up the participant's voice
2	Introductions
3	Explain purpose of the interview is to explore experiences of the clinical placement and their ideal clinical environment
4	Obtain written consent
5	Explain ground rules: <ul style="list-style-type: none"> <li>• Confidentiality of what is said in the interview</li> <li>• The transcripts will be anonymous and any quotes used will be anonymous</li> </ul>
6	<b>Don't forget to SWITCH THE TAPE-RECORDER ON now</b>
7	Focus the student's thoughts by reading out the statement below.
<p><b>Think about your recent clinical placement at the Queen Elizabeth Hospital.....</b></p> <ol style="list-style-type: none"> <li>1. Can you tell me which specialty you did your clinical placement?</li> <li>2. Could you tell me about your experience on the ward, both the good and the bad?</li> <li>3. What did you enjoy or like about your clinical placement?</li> <li>4. What did you dislike about your clinical placement?</li> <li>5. Do you feel this was a good learning experience? Why would that be?</li> <li>6. Tell me about the people around you – the ward sister, your supervisor, the clinical instructor – how did they contribute to your learning experience on the ward?</li> <li>7. If you could imagine working in a ward that had an ideal learning environment, please describe what would it be like?</li> <li>8. What would it feel like to be working in such a place?</li> <li>9. Please tell me about your experience with working with the clinical instructor that is different from that of the staff nurse or ward sister?</li> <li>10. What is it that makes working with the clinical instructor so desirable that you want more during your clinical placement?</li> <li>11. I would like you to think about the future when you are a staff nurse and later a ward sister/ward manager – how will you support the nursing student on your ward? How could you possibly handle the situation?</li> <li>12. Is there anything else you would like to discuss about your learning experience on the clinical placement?</li> </ol>	
<p><b>This is a topic guide, please use general prompts below to help clarify what students say</b></p> <p><b>General prompts</b></p> <p>Can you give me an example?</p> <p>Can you explain that a bit more?</p> <p>What did that feel like?</p>	

## **5.7 Data collection**

Due to time constraints, it was not possible to directly observe students' experiences on the assigned ward. Individual face-to-face semi-structured interviews were chosen for this qualitative study (Study 2). Focus groups were not utilised to gather the data because the student nurses did not have a common ward experience. All the student nurses had placements on different wards therefore it would have been time-consuming and unhelpful for each to relate their story in depth. Focus groups are useful when there are common experiences among potential participants (Doody, Slevin & Taggart, 2013). Another reason for the preference of individual interviews over focus groups relates to the fact that some participants may feel uncomfortable describing their experiences and opinions in the presence of their peers (Webb & Kevern, 2001; Polit & Beck, 2014).

The two pilot participants were included in the main study sample as no revisions of the topic guide were required. A total of ten interviews were carried out over a six-month period, between July 2010 and January 2011. Interviews were conducted either at the hospital or the college. All interviews were audio-recorded to catch the quality of the experience and to provide a physically lasting record for analysis (Coolican, 2014; Jackson, Daly & Davidson, 2008). Interviews lasted between 30 and 60 minutes. Participants were encouraged to talk freely about the nature of the practice experience during their immediate clinical placement at the time of the interview. Each interview was transcribed verbatim for analytical purposes and anonymized. This allowed for familiarization with the data and thus initiated the first stage of the analytical process (Jackson et al., 2008). Transcripts were returned to respective students for additional comments or changes if they so desired. No edits were made by any of the students.

## 5.8 Data analysis

The approach used to analyse the transcripts was thematic analysis (Braun & Clarke, 2006). Braun and Clarke's (2006) article on thematic analysis outlines six steps for analysing the qualitative data, which were applied to the present study.

**1. The researcher becoming familiar with the data.** Transcripts were read and reread, and checked against the original audio recordings to ensure an accurate representation of the student's interview. During this process no concepts were formulated from the data. Additionally, the literature was not used to guide conception of possible patterns which would have been deductive analysis.

**2. Generating codes from the data.** A line-by-line analysis of a hard copy of each student's transcript was performed to generate codes. Afterward, the codes and reflected segments of data were manually entered into a Microsoft Excel spreadsheet. All transcripts were manually coded allowing the researcher to be totally immersed in the data. The codes from the first two transcripts were compared and discussed with supervisors (S.H and C.M) to ensure accurate representation of the data. Figure 8 and Appendix M presents a section of a coded transcript.

**3. Grouping the codes and organising them into themes.** Codes that showed patterns were grouped together to form a theme. Overarching themes emerged from links between themes.

**4. Refinement of themes.** All collated data extracts (for each theme) were read to determine whether the data reflected the theme. The entire data set was re-read to code any additional data within the themes that may have been missed in earlier coding stages.

Figure 8: An example of a coded transcript

Transcript	Code
<p>Student 4: After this experience, <b>I hoped not to be assigned to that ward after graduation. I felt sad. The nurses are supposed to work as a team, supposed to be working together irrespective of the shifts. They should be able to work together and resolve their problems.</b> I recall an instance where a <b>Sister remarked, “I am not taking over the ward until all those urinals are empty”.</b> Apparently <b>the team coming onto the ward noticed that the urinals were not emptied and this triggered a bit of conflict between the nurses. I assumed this would contribute to reduced patient care.</b> Actually a better phrase here might be <b>“inadequate attention to patients”.</b> If staff are coming onto the ward and <b>they are stressed, they cannot give the patient the kind of attention, the kind of interaction that should be given</b> (pause), <b>thus there are aspects of patient care that may become deficient.</b></p>	<p>Don't want to work on that ward after graduation</p> <p>Felt sad</p> <p>Nurses</p> <p>Teamwork</p> <p>Sister</p> <p>Teamwork</p> <p>Conflict, nurses</p> <p>I/we, the student</p> <p>Patient care</p> <p>Staff</p> <p>Interaction</p> <p>Patient care</p> <p>Staff</p> <p>Patient care</p>

5. **Defining and naming of the themes.** This consisted of re-labelling each overarching theme and appropriate sub-themes, as necessary, as well as ensuring that each theme was supported by the appropriate data.

**6. Production of a written report of the findings with supporting quotes.** The data were reported in the context of the research question and previous literature on the subject matter.

## **5.9 Ethics**

See Chapter three in regard to ethical approval for this study.

## **5.10 Data quality Issues**

Lincoln and Guba (1985) suggested four criteria for determining the trustworthiness of qualitative studies: credibility, transferability, dependability, and conformability. These important issues were considered in the study. Table 19 presents the areas considered and how they were addressed in the present study.

**Table 19: Data quality issues in qualitative study 2**

Term	Definition of the term	How addressed in Study Two
<b>Credibility</b>	The criteria recommended for assessing the truth value of qualitative research (Guba & Lincoln, 1989).	<ul style="list-style-type: none"> <li>• Transcripts returned to participants for review and comment</li> </ul>
<b>Transferability</b>	To determine the extent to which the reader (e.g., student nurses) can apply the study's findings to similar experienced on hospital ward settings used for the practical training of student nurses (Polit & Beck, 2014). Previously known as fittingness (Polit & Beck, 2014).	<ul style="list-style-type: none"> <li>• The setting for the study was documented</li> <li>• Findings and supporting quotes provided in the thesis (Chapter 5)</li> <li>• The data findings were grounded in the student nurses' experiences</li> </ul>
<b>Dependability</b>	Refers to the researcher's decision trail throughout the research process (Topping, 2010).	<ul style="list-style-type: none"> <li>• The research question underpinned by the study methodology and the overall research methodology.</li> <li>• Codes were compared and consensus reached that there was no revision by the researcher and supervisors (CM and SH)</li> <li>• Data collection and analysis performed simultaneously and reaching data saturation</li> </ul>
<b>Confirmability</b>	Refers to ensuring the interview findings reflect the student nurses' views (Topping, 2010; Polit & Beck, 2014).	<ul style="list-style-type: none"> <li>• Themes created were grounded in the transcribed data.</li> <li>• The analytical approach (thematic analysis) was outlined</li> <li>• Supportive quotes were presented for the respective themes.</li> <li>• Reflective diary was maintained to minimize bias, and identify power relations issues.</li> </ul>

### **5.11 Reflexivity**

It has been suggested that researchers should continually critically evaluate how their role, beliefs, values and experiences impact the qualitative findings and conclusions (Patton, 2002; King & Horrocks, 2010). This is referred to as reflexivity and consists of two types, epistemological and personal (Willig, 2008). Epistemological reflexivity involves (1) the researcher reflecting on the research process and determining whether it could have been conducted differently (Willig, 2008), and, (2) the extent to which the researcher's philosophical stance, values and beliefs have impacted the research, its findings and conclusion (Dowling, 2006). Reflecting on how the researcher's position may have shaped the research and influenced both the researcher and participants is termed personal reflexivity (Willig, 2008; Newbury, 2011).

In regard to my personal role, the researcher was known to the participants because of my role as Clinical Coordinator. Therefore, during the interview data collection period, a colleague was asked to invite potential participants to the qualitative study and distribute the participant information sheets. My role during the data collection was to prompt, probe and stimulate the interviewees to reflect and share their experiences.

In the analysis, all efforts were made to stay true to the data in constructing the themes in order to reduce potential bias. However, it relied on the researcher's interpretation of the data to be able to describe the student nurses' learning experiences (Jootun, McGhee & Marland, 2009). It is possible the interpretation made during analysis could have been biased because of one's professional views of the students' experiences on the wards. Therefore, a conscious effort was made to focus solely on the students' views of their ward experience. Keeping a reflective diary was important. It allowed for (1) thoughts about the research process in order to identify areas for improvement as well as to inform me concerning my beliefs and assumptions in regard to student nurses' ward experiences; (2) self-awareness on

whether I may have influenced each interview due to the power relations and (3) assistance in interpreting the qualitative findings.

## **5.11 Results**

The study participants ranged in age from 21 to 50 years. There were nine females and one male participant. See Table 20 regarding demographic details of participants. The participants were on placement in the surgical or medical wards at the time of the data collection. Careful analysis generated five overarching themes and thirteen sub-themes relating to interactions between the ward sister and team (Engaged, Proactive and Communicative, versus No Cohesion), and the students (Willing and Motivated), which led to Positive or Negative Consequences (see Figure 9).

### **5.11.1 Theme 1: Engaged, Proactive and Communicative Team**

This theme captures the positive factors that informed student nurses' clinical learning. Generated from the data were the good roles and attitudes of ward sisters and staff nurses; the willingness of ward team to engage in a teaching relationship; as well as nurses and student nurses interaction with patients. The following sub-themes emerged during the analysis of the data:

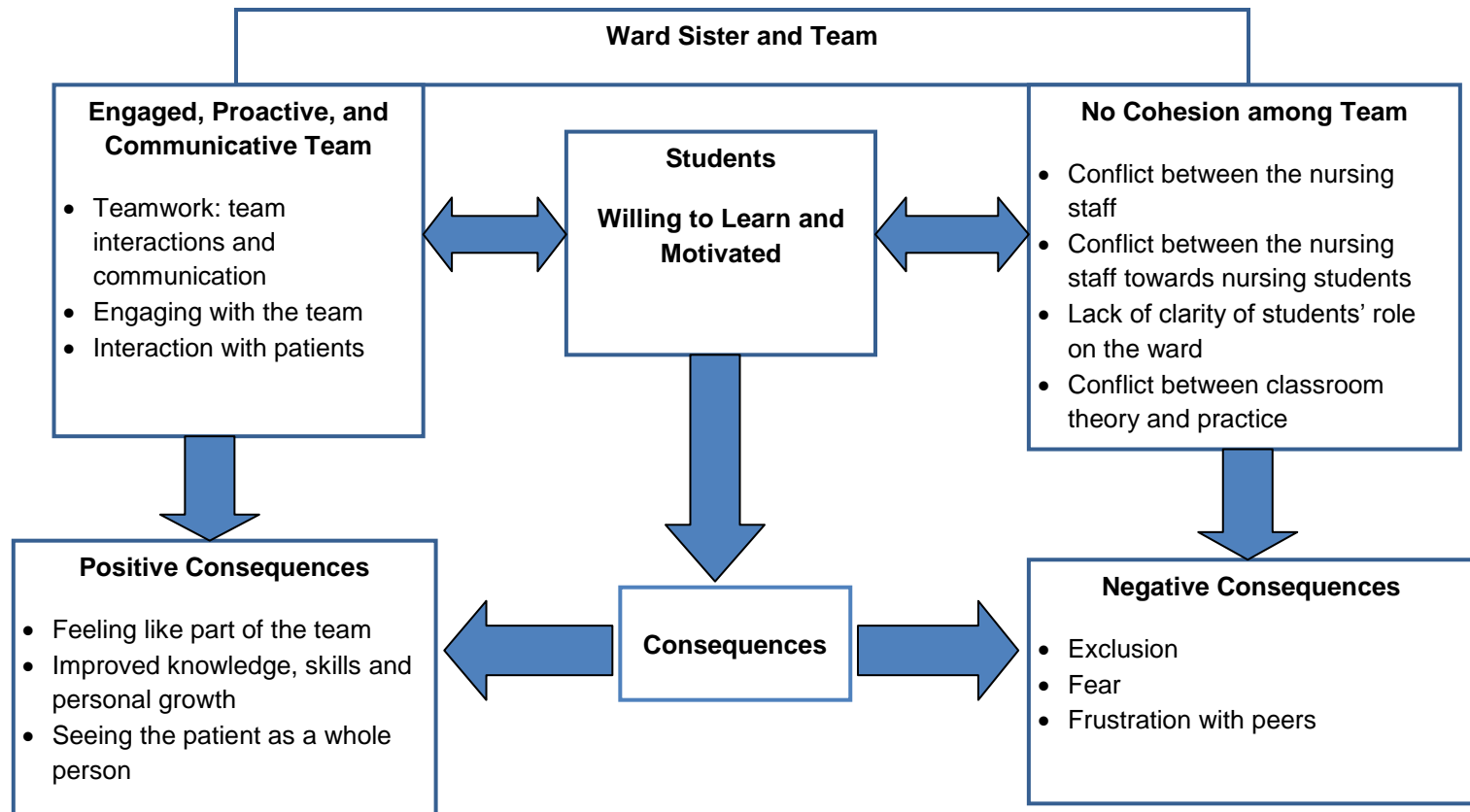
- Teamwork: team interactions and communication are good
- Engaging with the team
- Interaction with patients



Table 20: Interviewee demographic details ( $n = 10$ )

Interviewee's ID	Age	Gender	Study year	Ward placement
Student 1	41	Female	Third	Medical
Student 2	21	Female	Third	Surgical
Student 3	26	Female	Third	Surgical
Student 4	33	Female	Third	Medical
Student 5	37	Female	Second	Medical
Student 6	49	Female	Second	Surgical
Student 7	50	Female	Second	Medical
Student 8	25	Female	Third	Surgical
Student 9	25	Male	Second	Surgical
Student 10	21	Female	Third	Surgical

Figure 9: Student nurses views of their ward placement learning experience



**Sub-theme: Teamwork: team interactions and communication are good**

Two features of a good ward team interaction were described. Some participants described working as a team as one feature of team interaction in an ideal ward.

*Student 1: [Ideal] "...the closest one can get is everyone working together as a team."*

*Student 2: [Ideal] "...everyone will work in harmony, um, with no conflict..."*

*Student 6: [Ideal] "...the nurses actually work as a team, together with the student nurses and the doctors... everyone working as part of the team for the benefit of the patients..."*

The above quote by Student 6 show how this participant saw working as a team crucial for effective patient care.

The second feature of a good ward team interaction was the ward sister functioning as a team player. This was also supported by the expectations of some students on the ward.

*Student 1: "...but the ward sisters participate... in looking after the clients as well... she is actually being part of the team. She does not simply sit behind the desk and give orders."*

*Student 3: [Ideal] "It would be nice if the sister would assess the situation on her ward and if there is need for help, then she could come and lend assistance...."*

Good communication between the ward team was believed by some student nurses to be a good experience.

*Student 5: "...the staff on [the ward] communicate and work well together..."*

*Student 2: "There should be no attitudes or harsh words..."*

The following quote highlights the ward sister's key role in ensuring effective communication on the ward.

*Student 4: "The ward sister's role is mainly to ensure proper communication with and between staff."*

### **Sub-theme: Engaging with the team**

This was described by the participants as the willingness of the ward team to facilitate student learning.

#### *Characteristics*

Students reflected on the most valued characteristics across some of the different teams in facilitation of their clinical learning (see Table 21). Effective communication and 'feeling welcome' or 'being student friendly' were major attributes of the ward sister and nursing team.

#### *Learning: Approach*

The team utilised various approaches to facilitate student learning (see Table 22). Within each team the following approaches were utilised to a large extent: questioning, guidance and demonstration of practical skills. Doctors also facilitated in student nurses' clinical learning through questioning (see Table 22). Some student nurses believed that being questioned by the some groups within the team was an opportunity to engage in lateral thinking.

*Student 9: "...she [supervising staff nurse] also taught us to think outside the box instead of simply thinking about one specific condition..."*

*Student 10: "The instructor encouraged me to figure out things for myself whereas the ward nurse or sister would actually tell me the answers."*

### *Learning opportunities*

A major learning opportunity for the student nurses working with the educational team was patient care. The following quotes provide examples of students were questioned by the doctors as shown in the following quote.

*Student 7: "...she [staff nurse] would asked, "so what do you think, what you think?", thus if she asked us "what we thought the we would have to think"...*

*Student 8: "...the doctors would ask us questions based on the care and the discussion would lead to better nursing care..."*

The "hands on experience" was another learning opportunity for some participants. The experience was seen as an opportunity to reinforce classroom theory.

*Student 5: "...I was given the opportunity to have hands-on experience and this backs up and reinforces what was learnt in theory..."*

### *Clinical instructors*

The limited number of clinical instructors was an issue for some student nurses.

*Student 1: "There weren't enough clinical instructors around to correct us..."*

The learning opportunities missed as a result of lack of clinical instructors available to support learning were lack of correction and guidance.

*Student 2: "Well the priority for me would be to see more instructors on the ward. I understand that it would not be possible every day but we need a bit more time with an instructor than we are presently getting. In this way we (students) can get more benefits such as more information and teaching so to improve our knowledge."*

**Table 21: Examples from participants' transcripts - Most valued characteristics among the different group of the team**

Team member/Characteristics/Participant's transcript		
Ward sister	Nursing staff	Clinical instructor
<b>Adequately communicate</b>	<b>Adequately communicate</b>	<b>Knowledgeable</b>
<i>Student 2: "Communication wise she is giving information to and forth..."</i>	<i>Student 3: [ideal] "...I would be oriented to the ward, told where resources are..."</i>	<i>Student 1: "They are very knowledgeable when it comes to nursing in general..."</i>
<b>Feel welcome</b>	<b>Student friendly</b>	<b>Caring</b>
<i>Student 10: "She (Ward Sister) came in and introduced herself to us..."</i>	<i>Student 10: "...the student friendly ward, making sure that the students feel welcomed..."</i>	<i>Student 10: "...she [clinical instructor] actually cared and wanted what was best for us..."</i>
<b>Display a keen interest in her clients</b>	<b>Willingness to help</b>	<b>Facilitator and liaison</b>
<i>Student 1: "...she is paying a keen interest to her clients..."</i>	<i>Student 5: "...the nurses on this ward are very professional and willing to help students..."</i>	<i>Student 4: "The role of the clinical instructor is to ....make sure everything is running smoothly... to find out if there is a problem..."</i>
<b>Understanding</b>	<b>Showing an interest in student's learning</b>	
<i>Student 6: "At least the sister understood that being a student nurse is important and having the practice is also important..."</i>	<i>Student 4: "...they are really interested in you... they want you to succeed..."</i>	

Team member/Characteristics/Participant's transcript		
Ward sister	Nursing staff	Clinical instructor
<b>Appreciation</b>	<b>Approachable</b>	
<i>Student 10: "The sister... is appreciative of the work we did..."</i>	<i>Student 9: [Future staff nurse] "...[Students] are able to come and talk to me and I explain to them..."</i>	

**Table 22: Examples from participants' transcripts - Educational approaches utilised by the ward team**

Team member/Characteristics/Participant's transcript			
Ward sister	Nursing staff	Clinical instructor	Doctors
<b>Questioning</b> <i>Student 1: "she [Ward Sister] would ask us some questions..."</i>	<b>Questioning</b> <i>Student 8: "some that would really question"</i>	<b>Questioning</b> <i>Student 5: "ask questions and answer questions"</i>	<b>Questioning</b> <i>Student 7: "the doctors asked us one or two questions"</i>
<b>Guidance</b> <i>Student 9: [Future ward sister] "...to act as a guide..."</i>	<b>Guidance</b> <i>Student 6: "some of the nurses would actually guide us if we did not know"</i>	<b>Guidance</b> <i>Student 1: "They [instructors] also guided us"</i>	
<b>Demonstration- practical skills</b> <i>Student 3: "show us how to write out the fluid balance charts correctly"</i>	<b>Demonstration-practical skills</b> <i>Student 10: [Future staff nurse] "...I would be able to show all the students the new ways"</i>	<b>Demonstration-practical skills</b> <i>Student 5: [Ideal] "they would show the students"</i>	
<b>Explanation</b> <i>Student 9: "...letting us know the importance of being on time"</i>	<b>Explanation</b> <i>Student 2: "she would answer questions"</i>	<b>Correction</b> <i>Student 8: "if they [Instructors] see us... doing something that they knew should not be done, they would correct us"</i>	



Team member/Characteristics/Participant's transcript			
Ward sister	Nursing staff	Clinical instructor	Doctors
<b>Assistance</b> <i>Student 6: "...assisted us in getting in the skills"</i>	<b>Assistance</b> <i>Student 9: [Future staff nurse] "...assist them [students]"</i>	<b>Real case studies</b> <i>Student 3: "they [Instructors] will be able to explain why these patients are on the particular medications"</i>	
<b>Facilitator</b> <i>Student 10: "she actually helped us"</i>	<b>Correction</b> <i>Student 5: "if they think that something is not being done correctly they will come and show us how it should be done"</i>		
	<b>Real case studies</b> <i>Student 7: "[Staff nurses] they will give me a patient that is challenging"</i>		
	<b>Encouragement</b> <i>Student 8: "encourage us to make notes"</i>		

One student described the role of the clinical instructor on clinical placement as follows:

*Student 4: "The role of the clinical instructor should be to supervise the student nurse, and ensure that everything is running smoothly. They should interact with the students and nurses to solve any problems that may arise."*

### **Subtheme: Interaction with patients**

The subtheme 'interaction with patients' includes the interaction between ward nurses and patients as well as the learning opportunities arising from the staff nurse-patient interaction. It also includes the student to patient interaction and the related learning opportunities; resources and nursing staff levels to support learning.

#### *Nurse-patient interaction*

Some student nurses desired to see the registered nurses interacting with the patients and their relatives more than in the current situation.

*Student 3: [Ideal] "I would like to see the staff nurses interacting with the patients and family more because that way more information can be given."*

#### *Learning opportunities*

Students believed a learning opportunity that would arise from greater nurse-patient interaction include increased patient information. They described how this information would further assist in efficient patient care and patient's comfort during hospital stay.

*Student 5: [Ideal] "Staff [nurses] could have more conversations with patients, knowing that they are away from home in the hospital environment. This would help to put patients in a comfort zone..."*

### *Student-patient interaction and learning opportunities*

During their ward experience the student nurses interacted with the patients. Learning opportunities acquired from students interacting with patients were:

(1) “getting to know the patient”

*Student 1: “Just being there, talking to the client, getting to know the client...”*

(2) “learning about the patient’s condition/disease”

*Student 2: “In interacting with them [patients], we actually learn a great deal about the patients with diabetes, amputations, post-op and pre-op, and we get to know the patient.”*

(3) “motivate”

*Student 3: “...helping them to psychologically get out of this, I don’t know, they were like trapped, thinking that nothing can be done to help them, but I was able to motivate them and get them better...”*

(4) “meeting patient’s needs”

*Student 3: [Ideal] “...going to the patient to ask them if they need anything, even ask them before they ask you.”*

(5) “voice their [patients] concerns”

*Student 10: “I liked interacting with the patient, because you find that some... patients they just need someone to talk to, to voice their concerns, say how they feel or what they like...”*

One student commented on the patient’s gratitude and appreciation for the care given.

*Student 4: “There is one patient who stands out in my memory because they left me a card saying “an extra special thank you to the [student nurse]”. When this happened I got compliments from the staff. They said that the patient was pleased with the service they received.”*

### *Nursing staff and resources*

Ideally, some student nurses thought the ward should have adequate resources to support learning and for staff to deliver efficient patient care.

*Student 3: "[Ideal] Ensure that there are adequate resources so that one does not have to go to other wards to borrow."*

*Student 7: "The ideal ward would be equipped with all the necessary resources so the nurses can work efficiently."*

The ward sister was seen as responsible for ensuring that the ward had adequate resources.

*Student 5: "The sister ensured that there were adequate supplies on the ward."*

*Student 10: "[Ideal ward] ...if I was the ward sister I would make sure that at the end of the day all stock was replenished for the next shift so that there would be no need to be searching for stock or borrowing on the next day."*

Several student nurses desired more registered nurses on the wards to support their learning, as well as for efficient delivery of patient care.

*Student 8: "I think the ward need more staff nurses to really manage patients efficiently..."*

The missed learning opportunities due to the shortage of registered nurses were seen as lack of guidance and absence of demonstration of practical skills.

*Student 1: "...too many times the student is just left unsupervised, hoping that what he or she is doing is correct for the client, we need to have more supervision."*

*Student 6: "If the student nurses had more supervision they would actually be able to gain more experience..."*

The limited number of staff nurses available to supervise the student nurses was seen by one student nurse in a positive light. The situation allowed for greater participation in ward activities and contributed to a good experience.

*Student 9: "...on the positive side, the lack of staff [nurses] allows the student to do a bit more and get greater exposure, thus students feel more confident about doing things on the ward."*

#### **5.11.2 Theme 2: No Cohesion among Team**

The issues of poor attitudes and behaviour of the ward sister and registered nurses; misunderstanding of the student nurse's role on the ward; and, conflict between classroom theory and practice emerged from the data.

##### **Subtheme: Conflict between the nursing staff**

There were poor relationships between the ward nurses.

*Student 4: "The interpersonal relationship among the staff was not good at all."*

The ward sister's poor attitude and communication towards ward nurses lead to a poor team interaction.

*Student 3: "...The Sister was cruel in her treatment of the pregnant nurse because she was the only nurse working the entire ward and Sister did not lend a hand. ... I worked really hard with her and she thanked me. It was unfair she had to work the entire ward by herself and Sister did not help."*

*Student 6: "I didn't like how she [Ward Sister] responded and related to people. I guess it was the tone of voice she used."*

**Subtheme: Conflict between the nursing staff towards the student nurse**

The quote below describes the poor attitudes of the staff nurses towards the student nurses.

*Student 2: "...there was a horrible interaction of the staff nurse towards the students; and we did not want to work on the assigned ward."*

One student aptly described the nursing staff's poor attitude towards them as "not student friendly".

*Student 10: "The nurse supervising me was interested in doing her work and making sure that the care was given to the patients but she was not student friendly in my opinion. ...we would ask her questions but she was not interested in answering. She simply responded that we should go ask sister..."*

In the quotes below, even though the student nurses use the word "mentor", it seems to be role modelling issues that they were talking about and not the mentoring.

*Student 2: "...sometimes we needed mentors, sometimes we needed someone whom we would actually watch and say "I would like to be like her" but I have not really seen that in my supervisors."*

*Student 5: "I regard her [ward sister] as a mentor and I am trying to aspire to her standards. To be someone who is firm but approachable and gets the job done."*

### **Subtheme: Lack of clarity of students' role on ward**

The student nurses felt the nursing staff did not understand their role on the ward. The students' role seems to be as a worker instead of a student.

*Student 2: "The nurse would ask about our objectives and we would outline them. For example doing surgical dressings could be an objective. Then I would be stationed in a cubicle where no dressings are required. This is frustrating because I cannot realise my objective... Sometimes an entire day passes and I had no opportunity to achieve any of my objectives. Sometime we would tell the nurse about the problem but we do not get favourable responses."*

*Student 3: "When we are on the wards we are not like looking at the things that the nurse should be doing. We are just doing vital signs, bathing, administering medication but we are not looking at the critical areas. How would we know how to approach a problem for example "What would be the management of a patient for 24 hours?""*

*Student 8: "...if you are coming to learn then the situation where you are utilized as a pair of hands should not happen so often. I would like to think that it should not happen on so great a scale."*

### **Subtheme: Conflict between classroom theory and practice**

*Student 4: "...So students have problems when they go on the ward as some of the nurses don't want you to do things the way you learnt it. One example is medication."*

*Student 7: "What I learnt in the clinical area was sometimes contrary to that taught in skill lab, for example surgical dressing and administering medication."*

The quotes above capture the apparent disparity between what is taught in the classroom and what is actually practiced on the ward.

### 5.11.3 Theme 3: Students - Willing to Learn and Motivated

Some student nurses alluded to their own attributes. Being motivated and keen were identified as significant attributes towards their own clinical learning.

*Student 1: "It would be good for the Sister to have a very keen student..."*

*Student 9: "...we got really involved...."*

The student had to be willing to learn.

*Student 10: [Ideal] "I expect that the students will be there and willing to learn and have an open mind..."*

Some student nurses reported that some staff nurses were more willing to supervise them when they (students) showed an interest.

*Student 2: "Um in terms of the staff nurses, they really do help once we got into the process of doing things..."*

Some of the participants identified practical rehearsal as one of the learning opportunities acquired from being motivated and being willing to learn.

*Student 6: "... doing the same skills over and over is reinforcement and extra practice..."*

The personality of the student nurses also contributed to the learning experience. Reflective comments included "wanting to help people"; "love being there for the client"; and, "like interacting with the patient". One 3<sup>rd</sup> year student describes helping fellow student nurses to develop skill competency.

*Student 3: "They [second year nursing students] did not know anything and I was so sorry for them. Not in a bad way but I wish that I could help. That's why when they were around I tried to help them with their skills."*



#### 5.11.4 Theme 4: Positive Consequences

This theme describes the positive outcomes of the ward experience. These positive results comprise the following sub-themes:

- Feeling like part of the team
- Improved knowledge, skills and personal growth
- Seeing the patient as a whole person

##### **Subtheme: Feeling like part of the team**

As a result of a good ward team spirit, some participants felt like part of the team.

*Student 6: "It was good to know that as a student one can feel like part of the medical team, the nursing team. It is a better feeling than just being a student on a clinical placement."*

This 'feeling part of the team' was associated with a feeling of inclusion.

*Student 4: "...the sister would be discussing things to do with the ward and so on and she will include us."*

*Student 9: "It made me feel like I was actually part of something...like I am part of the whole team and that I have responsibilities..."*

##### **Subtheme: Improved knowledge, skills and personal growth**

Gaining a better understanding of nursing care, developing competence in practical skills, and personal growth as a nurse were key components of a good experience.

##### *Improved knowledge*

Students defined a learning opportunity as having a better understanding of medical conditions and nursing care, and connecting the classroom theory with real cases.

*Student 6: "The good thing about it was that one actually gains a better understanding of the disorders that the patients had..."*

*Student 9: "...the different conditions helped me to really connect with my theoretical studies, so having seen many things I can better understand why certain things are done in particular ways and other things are not because I can actually see the effects..."*

### *Improved skills*

Practical rehearsal of practical skills was also a key component of the ward experience. Some of the skills learnt were, applying pharmacology knowledge to the administration of medication; applying the classroom theory of wound care to performing surgical dressings; and, putting management skills into practice.

*Student 5: "...on the ward the staff nurses asked about a particular drug and the students were able to tell her about the drug, its mechanism of action, its side effects and this make one feel good because I remember..."*

*Student 1: "...learning how to change dressing adequately..."*

### *Personal growth as a nurse*

Some of the participants experienced personal growth as a nurse from their ward experience.

*Student 3: "...every day that I am going on my clinical placement, I am growing a little bit more and learning gradually..."*

*Student 7: "I am learning in terms of what is expected of me as a nurse so I try to do what is expected..."*

Some students appreciated what it will mean to be a staff nurse.

*Student 5: "It was an eye-opener for what is to come. When I leave the college and come into the work environment I would know what to expect as a staff nurse especially on night duty, seeing how things would really are."*

*Student 4: "...it gave us an opportunity to experience the world of work on the ward."*

In regard to personal growth as nurses, some student nurses defined a learning opportunity as feeling as though they had contributed on the ward, and being comfortable with their practical skills.

*Student 8: "...it makes one feel good when you are able to help and see those patients recover."*

*Student 9: "I felt a lot more comfortable with my skills..."*

The quotes below described how two students saw their future roles upon qualifying, which included being a "role model" and providing "guidance".

*Student 10: "[Future staff nurse and ward sister] ...demonstrate to them that they should be leaders and not followers..."*

*Student 9: "[Future staff nurse] ...guiding the students getting them up to par with what is required."*

One characteristic that was identified as a significant factor in facilitating student's learning on the ward was "approachability".

*Student 9: "[Future ward manager] I see myself in the future working and interacting with the student nurses. I would like to be quite approachable and friendly so there are no reservations in terms of coming to me....."*

On qualifying as a registered nurse and later a ward manager, students described approaches to facilitate student nurses' learning, for example "explain", "help", "demonstrate", "encourage", "motivate", and "guide". Supporting quotes includes:

*Student 10: "...encourage the students and give positive reinforcement by saying things like "yes what you are doing is correct keep on doing it"."*

*Student 9: "[Future staff nurse] ...I could explain to them and help them as best I can and ensure they meet everything that they need to. If there are questions or other special requirements, or things to be learnt, special situations that they should observe, then I can facilitate and help along the way."*

#### **Subtheme: Seeing the patient as a whole person**

Some of the participants saw the patient as a person as described in the quote below:

*Student 2: "In interacting with them, it actually shows us a great deal about our patients with diabetes, amputations, post-op and pre-op, and we got to learn the patient. It is a good experience because, we got to understand their feelings, those of their family and our feelings as well."*

Some student nurses found interacting with the patients allowed them an opportunity to know the patient. Consequently, they were better able to assist the patient with coping with hospitalization as reflected in the following quote.

*Student 3: "I enjoyed working in the middle cubicle because I worked with 2 patients who were in very critical condition and during my 4 weeks they improved as a result of my interaction and helping them to psychologically cope. They told me that they felt trapped, thinking that nothing could be done to help them, but I was able to motivate them and make them feel better."*

### 5.11.5 Theme 5: Negative Consequences

This theme describes the negative outcomes of poor team interaction on the ward. These included:

- Feelings of exclusion
- Fear
- Frustration with peers

#### **Subtheme: Feeling of exclusion**

The following quotes show student nurses were sometimes excluded from the nursing team.

*Student 4: "The bad experience was basically when the nurses would do certain things and leaves you out sometimes..."*

*Student 6: "...sometimes the nurses on the ward are really busy, sometimes they are short of staff... and they don't want to supervise the students in the performance of particular skills, they prefer to do it themselves to get it over with..."*

Some student nurses thought that a bad placement was too long.

*Student 2: "Seeing the staff members being impolite, and being frustrated, my assignment to that ward for 4 weeks was too long. It would have been better to see another ward, even if it was another surgical ward. That was the only thing I disliked."*

*Student 6: "...I really did not enjoy it that much. I think that my placement was too long on the surgical ward. I was on the surgical ward for 6 weeks and I really thought that it was too long to be on one ward."*

Due to a bad ward experience, one student nurse prefers not to work on that ward upon qualifying.

*Student 4: "After this experience, I did not want to work on that ward after graduation."*

### **Subtheme: Fear**

There was some degree of fear of performing practice skills due to the lack of supervision.

*Student 8: "...I was not getting help so those skills that you feel more competent in doing, I did. But there are other skills that you might need to master or might never have done but there is fear of doing them because there is no one to oversee."*

### **Subtheme: Frustration with peers**

This sub-theme describes the students' frustration with their colleague's behaviour on the ward.

*Student 7: "...how can you give care when you [student nurse] are not paying attention? ...you [student nurse] arrive late and are still distracted with other things. I mean that kind of thing annoys me because if you are behaving like this at this point in your training, what will it be like when you are a graduate?"*

*Student 8: "There are some students who try get everything for themselves in terms of clinical skills, and they do not share. It is frustrating."*

## **5.12 Discussion of interview findings**

The purpose of this qualitative study was to explore the practice experience of student nurses in the ward setting. From a critical realist perspective, the mechanisms responsible for the student nurses' practice experience were the ward team, student nurses and patients (agents), and their interactions (relations). The data will now be discussed.

### **5.12.1 Team interaction and communication**

The present study implies that the ward team spirit is a catalyst for students' practice experiences. The presence or absence of a team spirit contributed to the practice experience outcome. Previous studies yielded similar findings (Fretwell, 1980; Orton, 1981; Papp et al., 2003). In both the present study and previous studies (Fretwell, 1980; Orton, 1981; Papp et al., 2003), student nurses believed the student-staff interaction contributed to their satisfaction. New evidence from this study reveals that the professional attitudes of the ward nurses and ward sister toward each other were critical to students' satisfaction. A possible explanation for the differences may be due to the critical nursing shortage in Barbados. The acute shortage of qualified nurses in the hospital setting may have had an emotional impact on staff interactions.

In addition, the communication skills of the ward sister and nursing team were critical to students' satisfaction. Effective communication was one factor in the literature contributing to student nurses learning (Elcigil & Sari, 2011; Dale, Leland & Dale, 2013). In the literature, students focused on communication across various agencies that contributed to their satisfaction on clinical placement. These included communication between nurses and patients (Pearcey & Draper, 2008), communication between the clinical placement sites and nursing schools (Chabeli, 1999; Siggins Miller Consultants, 2012), communication between the clinical instructor and student (Esmaeili, Cheraghi, Salsali & Ghiyasvandian, 2014) and communication between mentor and student nurse (Elcigil & Sari 2011; Dale et al., 2013). Unlike the literature, participants in the present study focused on different agencies of communication which

contributed to student satisfaction. The current data implies that there are three aspects to communication on the wards: good communication within the ward team, poor communication between ward sister and nursing team, and poor communication among the ward nurses. Differences between the present study and relevant literature could be explained on the basis of the nursing team attitude. For example, when the nursing team displays a positive attitude it is possible that they may exhibit positive communication skills towards each other. The converse is also true. Another explanation might be the ward sister's unwillingness to be a team player, which in turn impacts her communication with staff. Ward sisters and nurses need to be made aware of the importance of effective communication on student satisfaction.

The current study implies that the ward is a place where the nursing team models attitudes and behaviours either positively or negatively. Learning theorists suggest that student nurses may not always reproduce the negative professional habits observed in the nursing team (Bahn 2001). However, reinforcement can increase the likelihood of demonstrating positive or negative behaviour (Bahn, 2001). It is the responsibility of the ward sister and nursing team to demonstrate acceptable behaviour and attitudes for student nurses (Braungart et al., 2014).

In previous studies student nurses outlined the most valued attitudes of the ward nurses (Savage, 1999; Chapman & Orb, 2001; Chan, 2001b; Condell et al., 2001; Foster, Ooms & Marks-Maran, 2015), and the clinical instructor (Chapman & Orb, 2001) which facilitate learning. The current study showed that the attitudes of the ward sisters were of high value in facilitating learning. Furthermore, some students believed that attributes such as "approachability" and being "friendly" were significant attitudes to be demonstrated as future ward sisters. Although the ward sisters' positive characteristics contributed to a good experience, little is achieved if the ward sister is not a team player and they (the Ward Sisters) do not allow the student nurses to be engaged. Ward sisters need to be aware of their attitudes to the team and student nurses. Research is needed to further understand the ward sister's role in the practical training of student nurses.



Nursing students' motivation to learn and to willingly participate in ward activities also contributed to satisfaction. Students' personal characteristics influenced their placement experience and this was also identified in the literature (Condell et al., 2001; Papp et al., 2003; Siggins Miller Consultants, 2012; Dale et al., 2013). Studies have found that self-directedness (Papp et al., 2003), readiness to learn (Dale et al., 2013), motivation and tendencies to ask questions (Condell et al., 2001) were desirable characteristics to facilitate student learning. The literature suggests that adequate supervision by clinical staff is hindered by students' poor attitudes during placement (Siggins and Miller Consultants, 2012). Poor attitudes can demonstrate a lack of team spirit and was a key source of frustration with peers in the present study. Of note, is that the literature does not address the learning opportunities which may arise from students' personal characteristics. In the current study, students believed that practical rehearsal was an indication of their willingness to learn and their motivation. Student nurses with positive personal attitudes should be encouraged and positive behaviour reinforced. Nurse educators need to address poor students' behaviour on placements.

In instances where student nurses or a team do not engage, then, having a keen student or a great team becomes meaningless. This implies that the student nurses' social place within the ward team is critical to their satisfaction. The nursing students place and their role within the social construct of a team are part of the 'community of practice' (Wenger, 1998). From a learning viewpoint, the inability of the students to engage with the team implies that student nurses are outsiders, in other words they are in a peripheral, non-engaging position (Lave & Wenger, 1991; Spouse, 1998). The present study indicates that as an outsider to the ward team, the student nurse experienced feelings of exclusion. Nurses as well as educators need to be aware of the significance of student nurses engaging in the team and its impact on clinical learning.

#### **5.12.2 Clinical teaching/Team's educational approach**

According to the current study, strategies to facilitate students' clinical learning varied across team groups. Questioning the students was a common proactive teaching approach among the different team groups. It is a common approach

used to assess and develop student nurses' critical thinking skills (Chan, 2013). One novel outcome of the present study was lateral thinking skills. In response to questions, students saw lateral thinking as a learning opportunity. Lateral thinking (de Bono, 1984) is defined as an indirect way of thinking, involving making connections between unrelated knowledge to solve a problem (Hernandez & Varkey, 2008; Jackson, 2012). This is different to vertical thinking where the student attempts solving clinical problems sequentially, by building on previous related knowledge (de Bono, 1984). Based on the present study, in order for student nurses to develop clinical reasoning and problem-solving skills, student nurses need to be encouraged and supported to "think outside the box".

Currently, a preceptor programme is provided nationally by the Barbados Community College for qualified nurses. The programme could be enhanced to include cognitive skills and strategies, such as lateral thinking, for effective clinical teaching of students. The student nurses' personal motivation to learn on the ward could also influence their use of lateral thinking. Positive reinforcements from the team may help to motivate students to think laterally when dealing with patient care situations. However, facilitating lateral thinking in practical training of student nurses depends on the attitudes of the ward team and the students.

Doctors have a substantive role in the success of student nurse practice experience. Learning from doctors as a prerequisite for good practice learning experience in nurse training is under-researched. In the present study, student nurses experienced limited learning opportunities from the doctors. However, the students liked being questioned by the doctors on patient care. This implies that students may increase their knowledge and learn from other health professionals (Hughes & Quinn, 2013). In addition, the aid of doctors in the contextual learning of student nurses would give the students a sense of being collaborators in clinical care as well as learn teamwork (World Health Organization (WHO), 2010; Hughes & Quinn, 2013).

In addition to the educational approaches of the team, the students felt that the nursing staff did not understand their role. The data are similar to Hart and Rotem's (1994) qualitative Australian study on 30 final year student nurses in a university setting. Australian students reported both they and the nursing staff misunderstood the students' clinical learning objectives; students were unsure of their role on clinical placement for a short duration; and, students experienced role conflict as a worker or learner (Hart & Rotem, 1994). The present data showed that students told staff what their objectives were but they were not given the opportunity to meet these objectives because they were given unrelated tasks to perform. An insufficient number of qualified nurses to provide efficient patient care may explain ward nurses viewing student nurses as part of the workforce. Nursing staff should have still regarded students as part of the workforce and ensured they met their objectives. The clinical instructor and ward sister could clarify the role of the student nurses on the wards.

Interestingly, in the current study, the clinical instructor was not seen as critical to student nurses' learning. Sealy's (2009) mixed-method Barbadian study of nursing professionals and student nurses which explored the implication of migration on nurse training, found there were an insufficient number of clinical instructors to support student learning on practice placement. Similarly, the present study found there were insufficient instructors during participants' placement experience. Participants in the current qualitative study wanted to see more of the clinical instructors. Insufficient numbers of qualified nurses on the wards might have forced the student nurses to rely on the clinical instructors. New evidence arising from the present study relates to the opportunities provided by instructors during students' experience which were missed. The current findings showed guidance and correction were opportunities missed because of insufficient instructors.

A possible explanation for the lack of instructors might be due to the timeframe of collecting the qualitative data. Most of the interviews were conducted during the summer period of the academic year, the time in which instructors are busy evaluating final year students through practical examination in preparation for professional registration, participating in entry-level interviews for potential

students, and annual leave. Consequently, instructors are unable to supervise the large student nurse population in the hospital setting. There is need for a greater presence of clinical instructors on the wards. At the same time, hospital administrators need to address the insufficient nursing human resource.

Students in the present study believed there was a disparity between classroom theory and what ward nurses actually practiced. This is consistent with a review on nursing students' practice learning experiences (Kaphagawani & Useh, 2013), and a focus group study in Finland and Sweden (Jonsén et al., 2013). Similar to that reported in the literature (Chun-Heung & French, 1997), current data found some qualified nurses believed clinical skills performed (as taught by the college) were idealistic and irrelevant to the clinical setting. Qualified nurses may be unwilling to teach or appear more interested in completing their clinical care, due to nursing staff shortages instead of mentoring students. Continuous professional development in clinical teaching may be necessary for all qualified nurses on the island to support student learning. Also, clinical instructors can facilitate the integration of theory and practice by supporting and co-operating with the nursing staff (Saarikoski et al., 2009). There is limited research on the ward nurses' views on their role in student learning. Research may be conducted on this area with a view to encouraging qualified nurses to implement their teaching role in the clinical setting in Barbados.

### **5.12.3 Interaction with patients**

In relation to their ideal learning environment, some study participants expressed a need for more patient interaction by the registered nurses. This concern by the students is a new phenomenon in the context of student satisfaction on placement. It is meaningless if a great nursing team does not interact with the patients. The nurses may work as a team, but this must lead to improved quality of patient care, provided that there is positive communication and patient interaction. In the current data, students believed more nurse-patient interaction would result in acquiring further information about patients and their conditions in order to make patients hospital stay more comfortable. Nurses should reflect on

their interaction with patients during care. Further research is needed on staff-patient interaction from the perspective of the nurse and patient.

Current findings imply that positive student nurse-patient interaction was also a key concept in viewing the patient holistically. The literature suggests student's characteristics, level of competencies (Suikkala & Leino-Kilpi, 2005), and the nature of patient care delivered by the student nurses (Dunn & Hansford, 1997) are features which influence the student-patient interaction either positively or negatively. Novel outcomes arising from the current study relate to the manner in which students view the patient as an individual, and the opportunities gained from their positive interaction with patients. Findings suggest that another key feature of learning in the clinical setting is recognizing the patient as a person in order to deliver holistic patient care effectively. Differences between studies might be due to sample and method. Suikkala and Leino-Kilpi's (2005) study sample included both patients and student nurses. Dunn and Hansford's (1997) mixed-method research utilised questionnaires and focus group interviews concurrently, and the sample reflected on an eight-week clinical placement across various hospital settings. The length of placement experience in different hospital settings may result in the sample focusing on commonalities across the various ward experiences.

In the present study, some students highlighted organizational shortcomings impacting clinical learning, for example, an insufficient number of qualified nurses to supervise students and lack of resources to support learning. Studies in Barbados have highlighted lack of clinical supervision of student nurses (The Nursing Council of Barbados, 2008; Sealy, 2009). One explanation for the inadequate supervision of student nurses relates to the limited number of qualified nurses according to the present study. Sealy (2009) suggests migration of qualified nurses has resulted in a nursing shortage in Barbados. The current study adds a new dimension to this debate. Some students believed that a lack of staff nurses resulted in reduced opportunities for guidance and demonstration of clinical procedures. Students experienced fear in participating in unsupervised ward activities. Increased levels of supervision may, consequently, prove useful in alleviating these feelings of fear. In addition, increased supervision would also

“build professional confidence and competence” (Siggins Miller Consultants, 2012, p.11). There is a paucity of research evaluating the “non-interpersonal aspects” of students’ practice experience (Darcy Associates Consulting Services, 2009, p.15). Therefore, further research may be needed to address the implication of resources (human and physical) on student learning. The way forward may be for health administrators to supply adequate resources to support student learning and quality patient care. In the face of a nursing shortage, ward sisters and senior nursing administrators should attempt to ensure that students are adequately supervised on placement.

#### **5.12.4 Study limitations**

One of the limitations of this study relates to the singular focus on student nurses, to the exclusion of other stakeholders’ (ward sisters, ward nurses, clinical instructors, etc.) perception of their influence on how student nurses learn on the hospital wards. The information would enhance nurse educators’ understanding of practical training for student nurses in Barbados. Another limitation may relate to the small sample size which impacts on the generalization of findings. However, data saturation was reached by the 10th student nurse. Due to the sample size, the setting in terms of a single nurse training educational facility and its related hospital, the findings of this study are not generalizable to other student nurses regionally and globally. This study aims to explore experiences in the Barbadian student nurse population rather than serving as a representative of the world of nursing students.

#### **5.14 Chapter summary**

This chapter described the qualitative method utilised in study two. Careful analysis suggested an effective ward team is a catalyst for positive experiences for student nurses. The sense of ‘belonging’ – of being an integral part of the care team, was generated from positive interactions between staff, patients and the student’s own personal characteristics. Again, it may be argued that a lack of teamwork was key to poor experiences for student nurses. Poor teamwork is a critical concept in terms of feelings of exclusion and fear. In addition, the Ward

Sister and registered nurses' attitudes and behaviour are critical elements of student nurses' placement. The next chapter will discuss the integrated data from both the quantitative and qualitative studies in order to draw conclusions on student nurses' views of their practice experience on the hospital ward.

## **Chapter 6: General Discussion and Conclusion**

### **6.1 Chapter Introduction**

The previous chapter presented the qualitative research method, its findings and a discussion of the qualitative data in relation to previous published research. In this chapter, a summary of the thesis is presented. Next, the findings from both studies are discussed in the context of the literature and educational learning theories. The limitations of the research follow. Implications for nurse training are investigated and conclusions of the findings are presented. Finally, reflection on the research is provided.

### **6.2 Summary of thesis**

Chapter one focused on the background of the research and literature review. The overall aim of this research was to understand student nurses' clinical placement learning experience at the Queen Elizabeth Hospital in Barbados, based on their current and desired clinical experiences. This information would assist in formulating recommendations to improve the students' hospital placement experience. The research objectives were: (1) to examine the student nurses' current learning experiences at the hospital; (2) to determine the student nurses' desired experiences at the hospital; and, (3) to compare and contrast their current clinical experience with their desired experience by integrating the data across the quantitative and qualitative studies. The overarching research questions for this thesis were:

1. *What are the student nurses' experiences of their clinical placement at the Queen Elizabeth Hospital?*
2. *To what extent can the student nurses' experiences of their clinical placement be understood in the context of learning theories?*

Consequently, chapter one provided background information on the historical context of nursing education globally and locally, and the educational learning theories.



Chapter two provided a critical review of the instruments used to measure entry-level student nurses' views of their clinical placements and the scales' psychometric qualities. Two international student-based outcome-measurement instruments were found appropriate for use in the Barbadian context, the *Clinical Learning Environment Inventory* (CLEI) (actual and ideal form) and the *Clinical Learning Environment, Supervision and Nurse Teacher* (CLES+T).

Chapter three discussed the design for the research - sequential explanatory mixed methods. See Figure 10 for an overview of the research process.

Chapter four described the quantitative study (Study 1), the results, and discussed the data in relation to the literature. Generally, the student nurses felt that their hospital placement experience was good. However, their current experience differed from what they desired. The subscale 'Cooperation between the ward staff and clinical instructor' did not influence the students' satisfaction with the current experience. Of note was the fact that satisfied students had more interaction with the supervising nurse(s) who showed concern for their personal welfare (personalization), their interaction was good (supervisory relationship), and they engaged in ward activities (student involvement). During the current experience 'satisfaction' described their experience. Also, 'task orientation', the 'leadership style of the ward sister' and the 'premises of nursing care' were very important to their learning experience. However, satisfied student nurses desired clearer, well organised ward activities (task orientation). The student nurses' current experience was less informed by the subscales teaching 'innovation' and 'relationship between student nurse, registered nurse, and clinical instructor'. Also, students were less informed by 'individualization' in both the current and desired experience. 'Individualization' refers to the extent student nurses are allowed to engage in clinical decisions and treated differently based on interest or ability (Chan, 2001a).

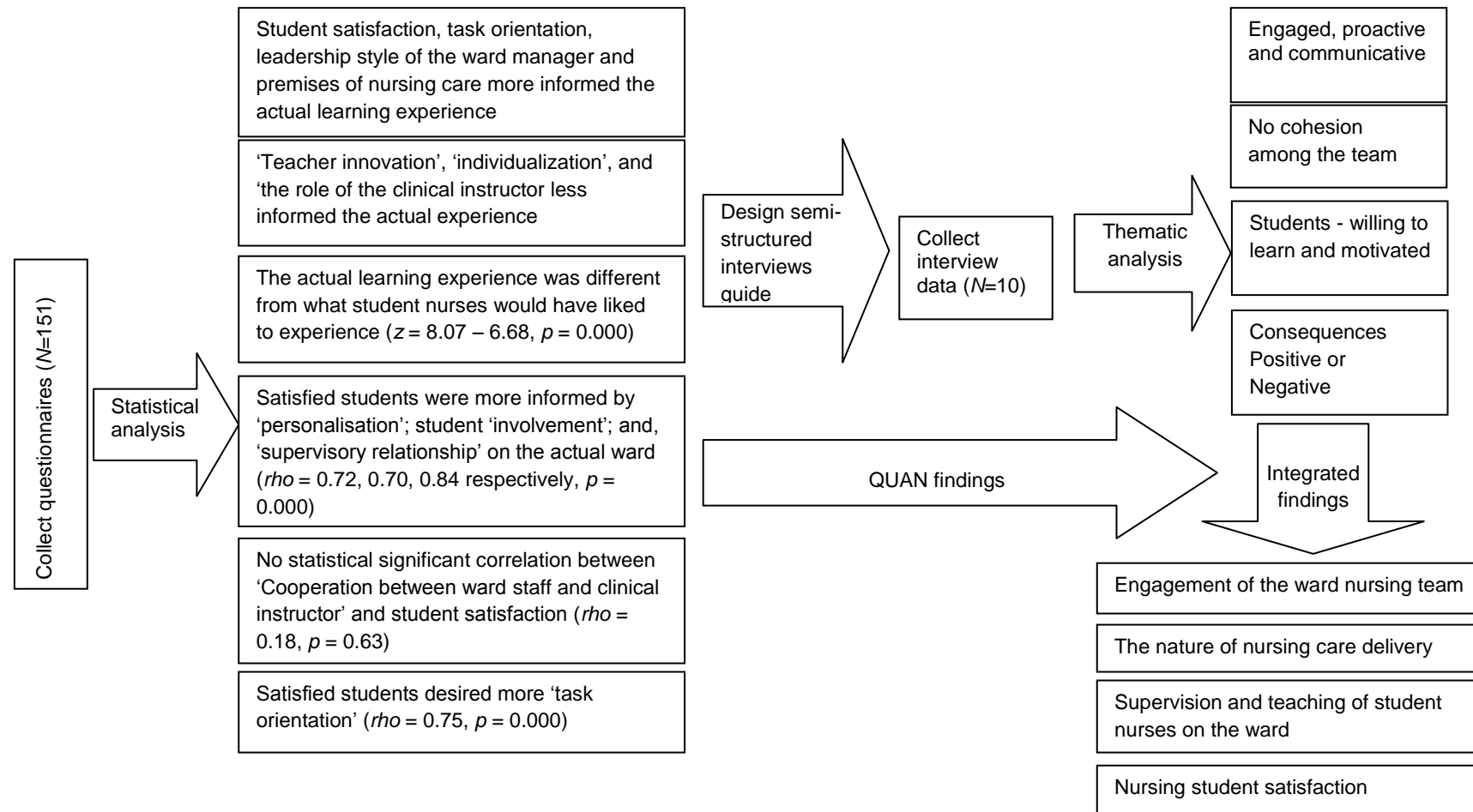
Chapter five described the qualitative study (Study 2), the findings, and discussed the findings in relation to the literature. Student nurses felt a good interaction and communication between the ward sister, team, students and patients (Engaged, Proactive and Communicative) was important to their satisfaction. Consequently, students felt like team players, had increased knowledge, improved skills and personal growth; and saw the patient as a whole person (Positive Consequences). On the other hand, poor team interaction and communication; nursing staff misunderstanding the student's role; and, theory-practice gap (No Cohesion among Team) led to feelings of exclusion; fear to perform clinical procedures due to lack of supervision; and frustration with peers (Negative Consequences). A student's willingness and motivation to learn contributed to a positive ward experience.

This chapter (Chapter six) will now provide a general discussion on the research and conclusion.

## **6.2 Overarching Findings across the Thesis**

A diagrammatic summary of this research thesis is provided in Figure 10. Based on the current studies, four major topics describe student nurses' learning experiences at the Queen Elizabeth Hospital in Barbados. These topics are 'Engagement of the Ward Nursing Team', 'The Nature of Nursing Care Delivery', 'Clinical Supervision and Teaching of Nursing Students on the Ward', and 'Nursing Student Satisfaction'. These topics will now be discussed in the context of the literature.

Figure 10: An overview of the sequential explanatory mixed-methods research process (Adapted from Dures *et al.* 2011)



### **6.2.1 Engagement of the ward nursing team**

Findings from this research highlight the importance of positive professional nurse role-modelling behaviour and effective communication skills, among the ward nursing team to enhance student nurses' learning experiences. In addition, current findings also revealed that the nature of the ward atmosphere and the ward team spirit are influenced by the ward sister's attitude and behaviour. Regional standards of nursing care in the Commonwealth Caribbean recommend positive professional interpersonal relationships among the nursing team in order to provide a positive nursing care environment (Pan American Health Organization/World Health Organization, 1983). However, the present qualitative findings have demonstrated that good interaction and effective communication skills between the nursing team members; and, between the ward sister and ward nurses, are also critical to enhancing student nurses' learning experiences on the wards. The findings of this research make a contribution to the knowledge of student nurse education in the clinical setting. It supports the argument that the atmosphere in a ward may affect student nurse learning either positively or negatively (Papp et al., 2003; Saarikoski & Leino-Kilpi, 2002; Warne et al., 2010).

Four key leadership factors that influence student nurses' clinical learning have been identified by Walker, Cooke, Henderson & Creedy (2011), in a review of papers published between 2000 and 2010. These factors were (a) the ward sister's influence on the ward environment, (b) transformative principles (for example empowerment, democracy and vision), (c) collaboration and relationship building and (d) role-modelling behaviour of the supervisor (Walker et al., 2011). This review suggests the leadership attributes of the ward sister and the student's clinical supervisor are crucial elements to the success or failure of learning on practice placement.

The negative professional attitude and behaviour of supervisors toward student nurses on clinical placements have been reported in the findings of this research and previous research findings (Löfmark et al., 2001; Mabuda et al., 2008; Ministry of Education and Human Resource Development, 2009). This supports the importance of the quality of student-supervisor interaction on student learning

and experience (Siggins Miller Consultants, 2012). Furthermore, the literature review by Walker et al (2011, p.756) showed a relationship between “positive nursing role-models and a supportive learning environment” on student clinical learning. This relationship could explain the clear association between student satisfaction and the ‘pedagogical atmosphere on the ward’ in the present questionnaire study (Study 1).

A new phenomenon arising from the present qualitative findings relates to the ward sister. Student nurses enjoyed the positive team spirit displayed by the ward sister. However, interpersonal conflict between the ward sister and the nursing team, and conflict among members of the nursing team, was not positively regarded by participants who believed it contributed to a negative learning experience. It may be argued that professional nurses need to reflect on their engagement with colleagues and student nurses in the ward setting (Esterhuizen, 2010). Nurse educators and administrators should ensure a positive ward atmosphere for clinical learning, in order to provide student nurses with meaningful learning experiences.

### **6.2.2 The nature of nursing care delivery**

Current research demonstrates that the success of hospital placement is dependent on effective delivery of nursing care and clarity of ward activities to be performed. The students indicated that they enjoyed being assigned specific tasks which empowered them and facilitated learning through experience. It cannot be assumed that the nature of the local hospital wards consists of task-based care, due to the highly rated scores of the feature well organised clinical activities’. The current research suggests the delivery of nursing care is patient-centred. One factor responsible for the differences between current data and previous studies (Chan 2001a; Papathanasiou et al., 2014), may involve differences in terminology with respect to the nature of the ward. In the development of the subscale ‘task orientation’, Chan (2001a; 2003) describes the nature of the ward to mean having well organised ward activities. In a Barbadian context, the nature of the ward is best described as delivering effective patient-centred care by means of clear order and organised ward. The clear order and

organisation of the ward includes clinical tasks or activities, the philosophy of the ward, documentation and client's information.

Cypriot student nurses also reported their learning experiences as being more informed by delivering nursing care, data collected by questionnaire surveys (Papastavrou et al., 2010). Papastavrou et al's. (2010) quantitative research is limited in an explanation for their findings. In Barbados, the students believed that they learnt through experience, as evident in the current qualitative interviews. Consequently, the experience improves their knowledge, skills and personal growth as future nurses. It provides support for the importance of delivering of nursing care in clinical nursing education.

### **6.2.3 Clinical supervision and teaching of nursing students on the ward**

Contemporary research findings demonstrate that the ward sister has limited supervisory responsibilities in student nurses' clinical learning (Saarikoski & Leino-Kilpi, 2002; Johansson et al., 2010; Bergjan & Hertel, 2013). However, this is not the case in Barbados. Current research has demonstrated that the ward sister still maintains a direct supervisory role in student nurses' education, which the students enjoy. A possible explanation for differences in the current research and previous research findings may be due to the shortage of qualified nurses on the wards to effectively supervise the students. Also, there may be differences in healthcare systems across countries.

Based on the current studies, a possible explanation for the correlation between clinical supervision and satisfaction might be the impact of limited, or absent clinical supervision for student learning. Ineffective clinical supervision of student nurses has been a great concern in Barbados for nurse educators (The Nursing Council of Barbados, 2008; Sealy, 2009). Similar findings emerged from the current qualitative study where some student nurses believed the shortage of qualified nurses had a negative impact on effective supervision. The current qualitative data provides additional reasons for inadequate supervision of student nurses. These were "nurses were too busy", qualified nurses refusing to

supervise nursing students, and qualified nurses preferred to perform the practical skill themselves to save time. Regionally, professional nurses' refusal to support student nurses' learning is a breach of their professional body guidelines (Pan American Health Organization/World Health Organization, 1983). It is possible that some qualified nurses may have used the excuse of "being too busy" to hide their own inexperience, in being able to effectively teach and evaluate student's clinical competencies (Sealy, 2009; Siggins Miller Consultants, 2012). Ideally, student nurses, in Study 2, felt the need for more nursing staff to support learning.

In current research the role of the clinical instructor is significant to student nurses' satisfaction, a fact supported by previous research findings (Campbell et al., 1994; Saarikoski et al., 2009; Esmaeili et al., 2014). However, a new phenomenon arising from this research suggests that no statistical association exists between student satisfaction and the subscale 'cooperation between ward staff and clinical instructor' within the CLES+T questionnaire. It implies that the students in Barbados did not believe their learning experiences could be enhanced by the clinical instructor sharing his/her expertise with the ward nurses and being a team player. Based on the current studies, students enjoyed the clinical instructor integrating the classroom theory into the ward setting, having a direct supervisory role, and solving relational issues on the wards. However, this is compounded by the limited number of clinical instructors on the wards, as evident by the current research and previous research findings on nurse training in Barbados (The Nursing Council of Barbados, 2008; Ministry of Education and Human Resource Development, 2009).

#### **6.2.4 Nursing student satisfaction**

One significant finding arising from this research was that student nurses believed learning through experience was important to connect classroom theory in the ward setting and personal growth in professional nursing. In the questionnaire students placed emphasis on their satisfaction which may mean students were highly satisfied learning through experience. Current research demonstrated that there are multiple factors influencing the learning experiences

of students, instead of a single factor, a conclusion noted in previous research (Dunn & Burnett, 1995; Chan, 2001b). Students' motivation to learn was deemed significant in the current qualitative data. While this intrinsic factor is an important element to clinical learning there is a risk for students to be pressured to adapt to the ward culture in order to belong and be recognized as a member of the ward team (Esterhuizen, 2010).

It is a normal response for a student to desire a better training experience, as evident in the current findings. However, providing the student nurses with what they desire may be different from what they really need. In Barbados, student nurses reported their desire for well organised ward activities, in order to be satisfied. A desire for well organised ward activities does not imply task-based care. It may indicate that effective delivery of patient care involves a clear order and organisation in a ward. Task-based rather than person-centred based care is not viewed in a favourable light. Instead, entry-level student nurses need to be more involved in individualised patient-centred care (Fawcett & Rhynas, 2014) to gain competency in critical thinking skills (Kaphagawani & Useh, 2013).

### **6.3 Relationship of Findings with Educational Learning Theories**

The previous section has discussed the major findings from the thesis research in the context of the literature. This section will now examine the current research findings in the context of educational learning theory.

#### **6.3.1 Repetitive practice of clinical tasks: influence of Behaviourism**

In Study 1, student nurses reported that actual practical training on the ward placed more emphasis on performing designated ward tasks activities (task orientation). This also contributed to student satisfaction in their desired ward setting. From a behaviourist perspective, if students continually correctly practice ward tasks it should result in task competence (McKenna, 1995a). The finding of the current qualitative study (Study 2) supports this statement, that nursing students experienced improved skill-competency from practical rehearsal. It



implies that repetitive practice is important for learning motor skills (Newell, 1991). This continuous practice of the ward tasks may be considered as a form of conditioning (McKenna, 1995a). Conditioning in behaviourism involves the learning of new behaviour by pairing a stimulus (e.g., practising the ward task) with a response (e.g., improved skill competency), as well as utilising reinforcement to maintain the acquired new ward task or skill (McKenna 1995a, Candela, 2012; Slavin, 2011; Handwerker, 2012). However, the student nurse must continually practice the learnt ward task so that their competency is not lost (Parker & Myrick, 2009).

Mastery of ward tasks through repetition relies on feedback on the student nurse's performance (Stayt, 2012). In the present qualitative study various behavioural cues (McKenna, 1995a; Slavin, 2011), such as guidance, correction and questioning were provided by some groups of the ward team. These cues could have prompted the student into demonstrating the ward task correctly. Feedback or cues may be considered a form of reinforcement (positive or negative) to influence behavioural change (Stayt, 2012). It appears that in the current qualitative study, the behavioural cues were positive external reinforcements.

In the current qualitative study, nursing students' willingness and motivation to learn on placement could be considered by the behaviourist as positive intrinsic reinforcement (Slavin, 2011). These positive personal characteristics could maintain the learnt ward task since the student nurses enjoyed engaging in the ward task activities (Braungart et al., 2014; Salvin, 2011). The current qualitative data also highlighted that student nurses had experienced positive extrinsic reinforcement from the nursing staff and patients thus influencing their learning experience. Examples of this were the gratitude from patients for the care given by the student nurses and encouragement from the nurses. These positive reinforcements could have helped motivate the student nurses to participate even more in activities on the ward.

Some student nurses expressed 'feeling good' and 'comfortable with their skills' when they accrued competency in a particular skill. These positive emotions may account for the students placing more emphasis on practising ward task activities in the desired learning experience. Behavioural learning theorists would apply the principle of 'consequences' and the concept of 'spread of effect' to explain the above findings. Behavioural learning theorists believe that the consequences of learning a ward task may either strengthen or weaken the student's response (Braungart et al., 2014; Slavin, 2011). For example, student nurses' sense of "feeling good" as a result of improved skill competencies was a positive consequence which could encourage the practice of more skills. Conversely, student nurses' fear (negative consequence) of performing a designated ward task unsupervised, could diminish their interest in learning tasks, as the student nurse may become afraid to practice the task in the future when unsupervised. Consequently, the student may never become competent in that particular task or skill. The influence of consequences on whether a ward task is continually practiced or not, is referred to as Thorndike's theory of law of effect (McKenna, 1995a).

Consequences that inhibit the ability to perform nursing tasks are known as 'punishers' (Braungart et al., 2014; Salvin, 2011). When nursing staff were too busy to answer students' questions and there was insufficient supervision given by qualified nurses, these may be considered as examples of punishers. When these incidents occurred, some students felt afraid to perform the ward task on their own. However, some student nurses saw this as a learning opportunity to practice more skills. This finding substantiates McKenna's (1995a) comments. She believed that an emotional response, such as fear, might not diminish the student nurse's ability to be competent in performing the skill (the response), instead alternative responses, such as participating in more ward task activities, can occur by 'trial and error' (McKenna, 1995a). It was noted in the qualitative study, that the lack of supervision was seen by some student nurses as opportunities to perform more nursing task activities, consequently increasing their confidence in performing the clinical skills. Woolfolk (2013) suggest that emotional responses can be learnt. In order to extinguish student's fear, the ward sister would have to ensure the student nurses are supervised at all times on the ward.

Participating in ward task activities and developing competency in practical skills is still important to entry-level nurse training. This is referred to as task-based learning (Harden, Laidlaw, Ker & Mitchell, 1996a; 1996b), where contextual learning is based on practical rehearsal of designated ward tasks. In addition, the student nurse tried to understand the principles underpinning the ward task from observing the nursing team and clinical instructor (Harden et al., 1996a, 1996b; Harden, Crosby, Davis, Howie & Struthers, 2000). Benner, Sutphen, Leonard & Day (2010) view the practical emphasis of nurse training on demonstrating ward task activities as 'skill-based apprenticeship'. This may also be considered as a form of behaviourist-based teaching approach. However, the cognitive aspects underpinning performing the ward task seem to be just as important in the students' learning experience. For example learning opportunities based on performing designed tasks were defined as applying pharmacological knowledge to administration of medication; applying classroom theory of wound care in applying surgical dressings; and putting management skills into practice, according to the current qualitative data.

### **6.3.2 Previous knowledge and lateral thinking: influence of Cognitivism**

In Study 2, student nurses reported how they applied what they learnt in the classroom to the clinical setting. By relating the information to real clinical situations, the students were able to improve their knowledge and skills. The concept of Gestalt theory of insightful learning (McKenna, 1995b; Hughes & Quinn, 2013) could explain the current findings. Cognitive learning theorists believe student nurses create relationships from relevant information from past experiences and/or classroom knowledge to understand the whole clinical situation (McKenna, 1995b). The student does this by utilising a higher order learning approach known as deep learning (Biggs & Tang, 2011). Learning, therefore, in the ward setting involves motor learning as well as thinking (Thomas, 2011; Hughes & Quinn, 2013). Inadequate supervision of student nurses could result in the student not experiencing insightful learning. Mentorship could facilitate the student through the insightful process compared to insufficient supervision (Thomas, 2011).

Several teams in the qualitative study used questioning as one of their major teaching methods. Cognitive learning theorists believe that when the teacher questions the student, they are trying to encourage the student to link the classroom knowledge with the clinical situation or task, therefore showing that the information is interrelated (McKenna, 1995b). This process of learning is described by some cognitive learning theorists as using the principles of *prägnanz*, a German term for 'essence' (Olson & Hergenbahn, 2012). For example, a student nurse may be asked questions in relation to wound care when demonstrating a surgical dressing. This encourages the student to perceive the relationship between their knowledge of wound care and demonstrating the procedure. As a result the student nurse would see not only the task and wound care as separate parts but as interrelated information. This may be one of the reasons why students experienced an increase in knowledge from a good ward learning experience. When the ward team asked questions, they can also identify what the student already knows.

A student nurse in the qualitative study reported how the staff nurse asked them to identify the appropriate care for the patient with a fever using the nursing process. Therefore, another strategy utilised in insightful learning was problem-solving to develop critical thinking skills (McKenna, 1995b). Kong, Qin, Zhou, Mou, and Gao (2014) suggests that problem-solving in nurse training encourages the student nurse to develop their critical thinking skills. However, emerging from the qualitative data was lateral thinking as a learning opportunity for student nurses instead of critical thinking. Some student nurses reported that the ward sister, staff nurses and clinical instructor made them "think outside the box". In other words, the student was encouraged to consider the task or clinical situation from different viewpoints (Hernandez & Varkey, 2008). Lateral thinking (de Bono, 1994) can be considered as another strategy to facilitate deep learning during placement learning experiences. In other cases the ward nursing staff would automatically give the students the information and this was not appreciated by the students because it did not allow for learning to take place.

In the current qualitative study, disparity between what is learnt in the classroom and what is actually practiced on the ward left some students confused. The

difficulty student nurses encounter in transferring classroom knowledge to practice has been suggested as a major reason for the theory-practice gap in the clinical setting (Lauder, Sharkey & Booth, 2004; Field, 2004). But nurse educators see practical training in clinical sites as the best way to link classroom theory and practice (Berragan, 2013). Student nurses should be encouraged to reflect on these encounters within the ward environment, where disparity exists (Berragan, 2013). This is known as 'reflective transfer' (Schön, 1995). The clinical instructor can assist the student in the reflective process so that student nurses can understand the activities seen in practice from a theoretical perspective (Saarikoski et al., 2013). Cognitive learning theorists suggest that student learning on the ward involves the transfer of skills and knowledge from the classroom to practice, assimilation of the information, and adaptation of psychomotor skills to the ward setting (Thomas, 2011).

### **6.3.3 Situated learning among a community of practice and cognitive apprenticeship: influence of Constructivism**

'Hands-on experience' was identified by the student nurses as an important aspect of their ward learning experience. 'Hand-on experience' may be considered as 'on-the-job training' (Wenger, 1998) or 'situated learning' (Lave & Wenger, 1991; Billett, 1994). This is the situation where student nurses participate as a member of the ward (i.e., the workplace) to perform tasks through their interaction with the ward team (Lave & Wenger, 1991). This has also been described as 'work-placed learning' (Raelin, 2008). In work-place learning the student nurses learn from the workplace (the ward) to link theory with practice, and to link knowledge with experience (Williams, 2010). On the ward (workplace) student nurses would develop their professional identity as a nurse and clinical competencies through interacting with the ward team (Lave & Wenger, 1991; Billett, 1994; Smedley & Morey, 2010; Patton, Higgs & Smith, 2013). In Study 2 some student nurses experienced personal growth as a nurse, thus supporting the above statement.

The ward setting may be described in terms of a 'community of practice' (Wenger, 1998). In Study 2, two 'communities of practice' existed in the ward

setting, the ward team (ward sister, staff nurses, doctors, patients and clinical instructors) and the ward nursing staff (ward sister and staff nurses). The student nurses are peripheral members within the communities of practice working toward full participation (Lave & Wenger, 1991; Wenger, 1998, Egan & Jaye, 2009; Thrysoe, Hounsgaard, Dohn & Wagner, 2010). Full participation occurs when the student nurses are seen as members of the ward team (Wenger, 1998). When there was good ward team spirit, student nurses felt like part of the team, as demonstrated in Study 2. This participation is legitimately supported by the ward team, particularly the nursing team, allowing the students the opportunity to perform tasks or skills (Wenger, 1998; Egan & Jaye, 2009). Therefore, the student nurses had moved from being peripheral members to full participants of the team. However, when there was lack of cohesion among the ward nursing team, student nurses felt excluded. Consequently, student nurses remained peripheral members. As found in Study 2, student nurses also negotiated their own place within the ward-based community through their own willingness to participate in clinical tasks. Some students felt the nursing team were more willing to facilitate their learning when students showed interest. It implies student's personal characteristics (willingness and motivation) could have contributed to nursing students moving towards full participation within the ward team.

Clinical supervision of the student nurses may be considered a form of scaffolding (Hean et al. 2009). Consequently, the type of interaction among the ward team influenced the quality of guidance and support provided by the nursing staff (the expert) (Collins et al., 1989; Patton et al. 2013). Inadequate supervision on the ward and poor student-staff relationships resulted in the students missing learning opportunities. These students may have never entered the 'fading' phase, where the support is gradually withdrawn until the student is competent to perform the ward task/skill independently (Collins et al., 1989). If the student nurse is allowed to engage in the team it is believed the student would perform at a higher level than when they are excluded from the team (Leinster, 2009). Vygotsky (1978) called the difference between the student nurse's actual knowledge of how to perform a particular ward task/skill and what they learnt from support, the 'zone of proximal development'. When there is positive interaction with the expert (staff nurse or clinical instructor), nursing students

would move from their current knowledge base to improved knowledge and skills, which might never have occurred without the support of the expert.

Based on Study 2 data, student nurses were able to observe the ward sister, staff nurses and clinical instructors demonstrating skills and they were sometimes given opportunities to ask questions. This is an illustration of the concept known as 'modelling' (Collins et al., 1989). By observing the supervising nurse or clinical instructor (expert) demonstrating the particular task/skill and being questioned on the task at hand, the student builds a mental picture of the process required in performing the task or skill (Collins et al., 1989). Another constructivist-based pedagogical strategy is coaching (Collins et al., 1989). Examples of coaching within the qualitative study were guidance, assistance and correction. Coaching involved the nursing expert (e.g., staff nurse or clinical instructor) observing the student nurse carrying out the task and giving support when needed (Collins et al., 1989).

Modelling, coaching, and scaffolding fit the cognitive apprenticeship model (Brown, Collins & Duguid, 1989; Collins et al., 1989; Cope et al., 2000). Based on the cognitive apprenticeship model (Collins et al., 1989), the current data from both studies imply the following:

- Student nurses learn professional nursing on the hospital wards (authentic setting);
- Students are supervised by experts, such as the ward sister, registered nurses and clinical instructor);
- The emphasis is on the thinking involved in demonstrating the designated ward task; and
- The quality of the ward team interaction either promotes or obstructs the student's clinical learning.

#### **6.3.4 The emotional component of learning clinical tasks: Influence of Humanism**

From the current qualitative data, some student nurses experienced personal growth from their clinical learning experience. From a humanist point of view, learning in the clinical environment should assist in helping the student nurse to individually grow and develop, personally and professionally (Purdy, 1997). The ward team, especially the nursing staff, should facilitate this learning process so the student nurse would be able to reach their fullest potential towards professional nursing (Maslow, 1968; McKenna, 1995c). In contrast, poor team interactions not only result in a bad learning experience for the student nurse but also undermines their potential for personal growth as a nurse and reduces clinical competency (Braungart et al., 2014). This implies that clinical learning is shaped by both the student nurse as well as the social aspects of the ward environment, which has been considered a major weakness of humanism learning theory (Purdy, 1997). Student nurses must feel as though they belong on the ward in order to effectively learn (Levett-Jones & Lathlean, 2008). The student nurse's sense of belonging is considered a basic human need (Levett-Jones, Lathlean, Maguire & McMillan, 2007).

The humanists emphasise self-direction, empowerment and autonomy as factors important to student learning on the ward (Hughes & Quinn, 2013). This was clear in the qualitative study when students were motivated and had a desire to learn. Additionally, patients and nursing staff were shown to encourage one of the participants. The patients and ward nursing team may be considered facilitators of student motivation as a result of their positive interaction with the student (McKenna, 1995c; Hughes & Quinn, 2013). Some student nurses noted having to exert their autonomy to learn on the ward. This motivation by the student nurse can be explained within the concept of 'self-directed learning' (Knowles 1975, cited by Levett-Jones 2005, p. 365). When a student nurse was autonomous and motivated, this was considered by Knowles (1975, cited by Levett-Jones 2005, p. 365) as taking the initiative for their learning. This initiative was also evident in the current qualitative study when students posed questions. However, not all students are self-directed in their learning (Levett-Jones, 2005).



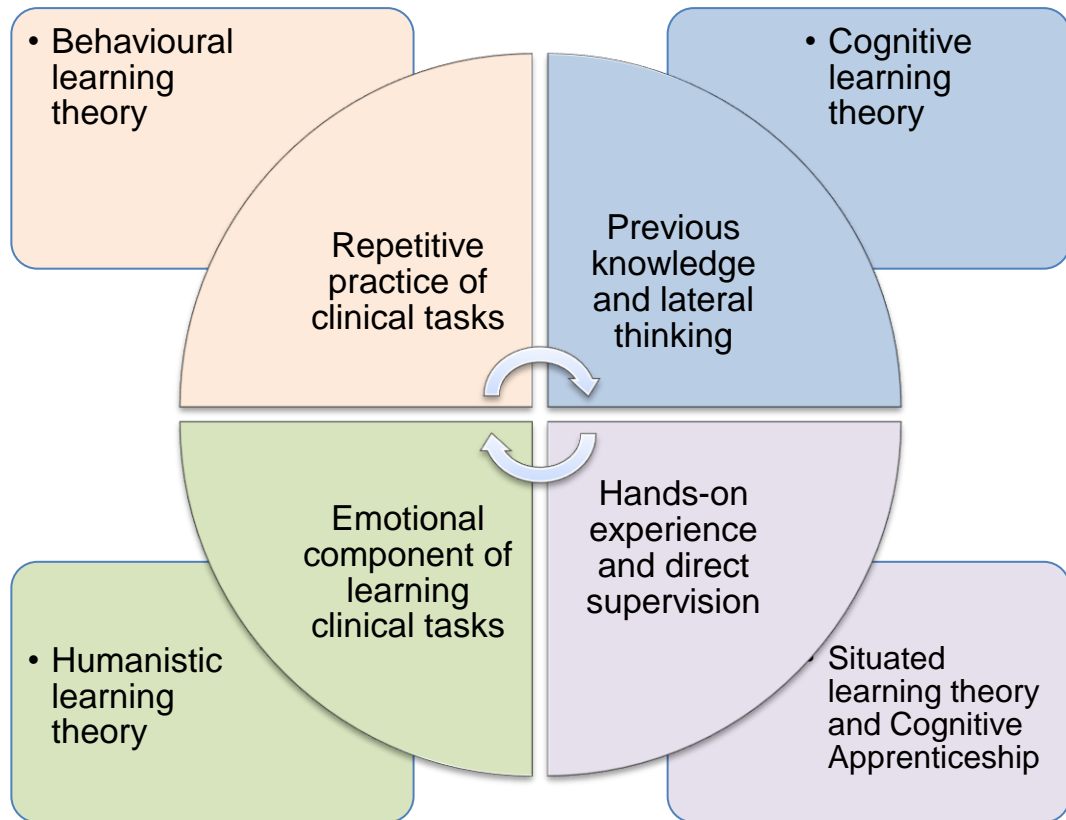
As mentioned earlier, the humanist believes that learning is the responsibility of the individual student while the teacher takes on a facilitative role (McKenna, 1995c; Hughes & Quinn, 2013). The current research implies that student nurses preferred to work as part of the team instead of being treated differently in terms of student's interest or ability. One explanation for this may be that students see themselves as adults responsible for their own learning (McKenna, 1995c; Purdy, 1997; Hughes & Quinn, 2013). This embraces the humanist perspective of andragogy (adult learning) influenced by the works of Malcolm Knowles (McKenna, 1995c; Purdy, 1997). Andragogy is the "the art and science of helping adults... learn" (Knowles 1975, p.19, cited by Purdy 1997, p. 194). Another possible explanation may relate to some student nurses lacking confidence in their own ability and knowledge. Therefore, a student might feel more comfortable working in a team, in order to hide their deficiencies, knowledge and inability to perform ward tasks.

#### **6.3.5 A proposed clinical educational model based on student nurses ward learning experience**

It is clear from this research that no single educational learning theory is highly effective in understanding student nurses' learning in the hospital ward setting. Each educational theory has its unique benefits to clinical learning within the context of nursing in Barbados. Consequently, I propose a clinical educational model based on the findings of the current research. Figure 11 shows the clinical educational model for student nurses learning based on their hospital ward experience (Researcher developed).

The model has taken important aspects from the learning theories discussed previously. Practical rehearsal of clinical tasks is based on the behaviourist approach to learning psychomotor tasks. Previous knowledge and lateral thinking are influenced by the cognitive approach to learning, which looks at the mental processes of learning on the ward. Learning the role of the professional nurse occurs in the ward setting, in order to link theory and practice and develop professionally through the social interaction of the ward team. This is situated learning which is underpinned by social constructivism (Braungart et al., 2014).

Figure 11: The clinical nursing educational model for student nurses' learning based on their hospital placement experience (Researcher developed)



The cognitive apprenticeship model also explains the clinical learning on the ward, and is rooted in situated learning theory (Collins et al., 1989). The final aspect is the affective or emotional component of learning tasks on the ward and is based on adult students being motivated, experiencing a sense of belonging to the ward team to learn which leads towards personal growth as a professional nurse. The affective aspect is underpinned by the humanist approach to learning. Consequently, the student would develop professionally and personally as a nurse.

### *Proposed model applied in practice*

A qualitative case will now be used to demonstrate how the student nurses' clinical placement experience could look when the proposed model is applied. The scenario is based on the subtheme 'lack of clarity of students' role on the ward'. Student 2 described the experience of informing a staff nurse about their clinical objectives on the assigned ward when asked by the nurse, for example, changing surgical dressings. The student reported (at the end of the shift) feeling frustrated for two reasons: being unable to achieve their objectives for the day and the staff nurse's negative response when the student raised the issue.

### *Repetitive practice of clinical tasks*

In repetitive practice of changing surgical dressings, the objective here is for the student to demonstrate a well organised clinical task when delivering patient-centred based care. The student acquires professional competencies in performing the task, but also learns the responsibilities of the registered nurse in performing wound care. Positive reinforcements would assist in further learning the designated task. These positive reinforcements could include a motivated student willing to learn to change dressings on the ward and the staff nurse exhibiting a positive attitude that facilitates the student to meet their clinical objectives.

### *Previous knowledge and lateral thinking*

The student applies previous knowledge from the college to the ward in terms of demonstration of the skill, as well as applying knowledge of wound care. The nurse facilitates the student's exposure to various surgical dressings in order to link classroom knowledge in practice as well as to solve problems during changing a dressing.

### *Hands-on experience and direct supervision*

Direct supervision is significant for the student nurse to improve his/her knowledge on changing dressing. Therefore, the student is allowed to engage with the nurse and perform the clinical task for the student to learn from the ward experience. In a supportive ward atmosphere, with the supervising registered nurse exhibiting effective communication skills, the student nurses can learn and practice dressings. The nurse provides guidance and feedback. If the nurse facilitates the student, assisting them in gaining practice in changing dressings, this would assist the student in moving from the assistance and guidance of the supervisor towards independently performing the ward task without support. Therefore, the student nurse moves from being a peripheral member to a fully participating member on the ward (Wenger 1998).

### *Emotional component of learning clinical tasks*

Consequently, the student nurse will not experience fear when demonstrating the clinical task unsupervised at this phase of independence. Furthermore, the student could experience personal growth in learning the responsibilities of a professional nurse as well as feeling part of the team. Implementing the proposed model requires nursing staff development and training in relation to positive professional behaviour towards student learning and supervision.

## **6.3 Limitations**

Due to the sequential mixed methods research design, there was a time difference between the data collection for the quantitative and qualitative studies. Some of the participants in the qualitative interviews were not part of the sample at the time of the questionnaire survey. This time difference between the studies could suggest that specific issues raised by the student nurses at the time of data collection of Study 1 may not have been those emphasised by students during the semi-structured interviews. Holding the qualitative interviews concurrently with the questionnaire survey, might have more effectively captured the student nurses' reflections on their placement experience among the same sample. However, a concurrent mixed method approach would not have allowed the

development of the interview schedule, based on the findings from the questionnaire study (Study 1). Therefore, further clarification of the major issues generated by the questionnaire analysis would not have been achieved.

The findings of this research are based solely on the student nurses' perception of their placement experience. Investigating ward nursing staff, the ward sister, and nurse educators' views of the hospital learning environment for clinical placement could provide broader insights into the clinical setting for student learning. However, inclusion of these other stakeholders' perspectives might have over shadowed the students' perspectives of the placement experience which was the primary objective of this thesis.

There was a small non-completion rate for the questionnaire survey in terms of participation in general and some students not responding to all the questionnaire items, which could have a subtle influence on the findings. Various reasons could have led to non-responses to some items - such as respondents may not have understood the item, or the item did not relate to their ward experience. In addition, the survey was lengthy which could have negatively impacted the responses. However, the students were allowed to complete the questionnaire at their convenience. The large percentage of questionnaires returned (approx. 70%) was appropriate for examination of their ward learning experience and their desired experience.

Due to the nature of the research design utilised, the findings cannot be generalised. The sample in the qualitative study was small in size. In addition, the major findings presented in this chapter are an integration of findings from both studies, which also has implications for generalizability. This researcher recommends that the reader apply the findings to their own context because the research is based on a single centre and very specific to Barbados.

It would have been useful to develop a questionnaire that incorporated the findings from both studies to apply to the student nurse population in Barbados. This research did not explore the students' perception of their hospital placement throughout the nursing programme. A longitudinal study would have been adequate to investigate and explore the pattern of change of perception of the hospital placement experience over time.

#### **6.4 Implications for nurse training**

It is hoped the proposed clinical nursing education model, presented in Figure 11, would be considered as an underlying theoretical approach for creating a new clinical nursing curriculum in Barbados. Notably, the present studies were undertaken on a sample of Barbadian nursing students which may suggest the applicability of this model to a Barbadian sample only. It is recommended, however, nurse educators who design nurse training programmes consider the proposed model as a possible framework to guide their practice. In addition, future research could be done to explore how learning theories are applied to the practical training of entry-level student nurses.

In order to address the misunderstanding of the student's role on practical placement, the local college's entry-level nursing curriculum would need to clearly define the student nurse's role. Furthermore, the student nurse's role would need to be communicated to nursing staff in health care facilities providing practical training of students. This will require clinical instructors providing more support to students and clinical nursing staff on practical placement. Proactive students should be praised as an act of positive reinforcement for their motivation to learn.

A major issue for some student nurses were performing their ward tasks unsupervised by nurses. Inadequate clinical supervision of student nurses on placement has implications for quality of patient or client care delivery (Fawcett & Rhynas, 2014). Indeed nursing students may graduate without meeting the minimum nursing competencies for professional licensing and practice (Sealy,

2009). To ensure patient safety and protect health care institutions from risk, there is a need to review health institutional policies regarding clinical teaching and supervision of student nurses. A functional mentorship programme at the local hospital is needed in the context of student learning. However, supervisory issues will still be problematic as long as administrators and policy-makers fail to address the nursing shortage. It is recommended that policies for the retention of registered nurses be developed. Future research is proposed to assess how ward sisters and nurses view the actual and desired ward environment in the context of nursing students' clinical learning and these may be compared.

Ineffective team interaction and communication on the wards also has implications for the quality of the ward atmosphere. Hospital in-service training to inform nurses on effective communication skills and staff-patient interaction is recommended. Future research perhaps should be considered on patients' views of students' clinical learning. Dissemination of the outcomes of the research to the hospital would inform ward sisters of their key role in student learning and student satisfaction. Continued professional development training for ward sisters is proposed not only for student learning but staff relations as well.

The unavailability of clinical instructors on hospital wards may have implications on the quality of nursing staff-student interactions and opportunities for student learning. A framework or policy addressing issues related to the accessibility and availability of clinical instructors on student placement must be developed. Educational administrators and clinical instructors may use the current research to better understand how students see the instructor's role and responsibilities on student placement to improve their practice. The challenge for a clinical instructor is to find new and innovative ways to work with student nurses in the clinical setting. The use of technology, such as communication tools has been suggested as a possible key to supporting student nurses in the ward setting (Saarikoski et al., 2009). Future research could assess clinical instructors' views of the actual ward and desired ward setting on student learning, as well as to shed light on what challenges they face in their clinical teaching role.

The questionnaires were helpful in assessing students' views of their hospital placement experience. However, the findings of the qualitative study should be used to develop a questionnaire more suitable for the Barbadian cultural context. A longitudinal study is proposed to assess changes in student nurses' views over time concerning their practical training in a hospital setting. In addition, future research could examine other clinical sites used for student nurse placement, such as the psychiatric, geriatric and primary health care settings, thus allowing for comparison on nursing students' practical learning experience in general.

## **6.5 Conclusion**

The findings of this research suggested that student nurses in Barbados perceive significant differences between their current and desired hospital learning experience. Student satisfaction was a priority in both the current and ideal learning experience when examined by the questionnaire survey. The qualitative findings suggested that the attitude of the ward sister and the qualified nursing staff contributed either positively or negatively to their pedagogical role in student learning. Students also suggested the ward team spirit is a catalyst for the student learning experience. Delivery of patient-centred based care through clear well organised ward activities and student involvement as a member of the ward team, may result in students experiencing personal growth. This personal growth refers to what it will mean to be a staff nurse and to acquire clinical competency.

These findings are very important in light of the fact that the clinical setting is a significant area for the professional development of the nurse. If the lack of support by qualified ward nurses continues in the ward environment over time, this may lead to student nurses graduating with limited clinical competency. Consequently, this in turn may lead to compromised patient care. Since clinical learning is at the heart of nursing education, the findings of this research have important implications for nursing education and health care administrators. To maintain a supportive ward environment for student nurse learning in the future, it may be necessary to provide the hospital nursing staff with training to improve their communication skills and preparation for their pedagogical role in student learning. Finally, healthcare administrators and nursing administrators should be



encouraged to address nursing shortages. The shortage impacts on student supervision and patient care.

## **6.6 Reflection**

It is implied from the current research that student nurses felt the clinical instructor had a dual role - as liaison and supervisor. The outcome of the research has influenced my own practice. Prior to the research findings my emphasis was on ensuring students were able to achieve their learning objectives on the clinical sites. The importance for me was on the supervision of student nurses. Presently, while still maintaining a supervisory role, a greater attempt has been made to liaise with the ward sister and nurses in terms of clinical teaching. This has been effective. Student-staff interaction has improved on the wards, although some challenges still arise at intervals. These challenges are referred to the head of the nursing department to be addressed. An awareness of the manner in which student nurses learn on the hospital wards in a Barbadian context, has led me to change my way of clinical teaching. The humanist approach to learning is now incorporated into my clinical teaching. This aspect of learning was previously taken for granted in favour of the more behaviourist and cognitive approaches to learning.

At the outset of my research, my role was a clinical coordinator. I am presently a clinical instructor with responsibilities for clinical teaching and supervision of student nurses and student midwives assigned to the Obstetrics Department at the Queen Elizabeth Hospital. Unfortunately, I have only been able to apply the research findings to my assigned clinical sites. The sample of student nurses in both studies did not evaluate their learning experiences on the obstetrics department at the hospital, because the students were not assigned to the area at the time of data collection. However, the proposed clinical education model above is applicable to any ward setting and is not speciality dependent. It is hoped that dissemination of the current findings to colleagues in the department will lead to application to practice. Also, publication of the research thesis would help inform the design of nurse education outside of Barbados. Future

assessment may indicate if there have been changes in the learning experiences of student nurses.

Students should be encouraged to reflect on their learning experiences on the clinical sites. This research allowed the participants to reflect. However, after discussion with some colleagues on the topic, they agreed that the present nurse training curriculum at the college lacks emphasis on reflective learning. It is possible that at the time of establishing the nurse training curriculum in Barbados in the mid-1980s the concept of reflection in professional nursing and nurse training was being established as a global phenomenon (Hughes & Quinn, 2013). It is still unclear why designers of nurse training in Barbados have since not fully established reflective practice into the curriculum. However, the new curriculum should emphasize that students reflect not only the negative aspects of their learning experience, but the positive as well. Reflection allows a student nurse to identify their strengths and weaknesses in clinical practice in order to make the necessary corrections (Watson, 2002). It is a way to link classroom theory to real clinical settings (Hughes & Quinn, 2013).

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## Appendices

**Appendix A: Summary of instruments use in entry-level nurse training to measure the clinical learning experience**

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
<b><i>Belongingness Scale-Clinical Placement Experience</i></b>					
Levett-Jones et al. (2009) Australia and England	362 students	Esteem Connectedness Efficacy	34 items  3 subscales  Scoring method: 5-point scale (from 'never true' to 'always true')  Reverse-scoring for negative items. Total score ranging from 34 - 170.	Cronbach $\alpha$ 0.92 (overall)  Cronbach $\alpha$ 0.80 - 0.90 (subscales)	<i>Content:</i> literature review  <i>Construct:</i> Factor analysis
Kim and Jung (2012) Korea	335 senior student nurses	Self-Esteem Connectedness Efficacy	34 questions  3 main subscales: self-esteem (13), connectedness (10), efficacy (10).  3 questions were not included in any category	Cronbach $\alpha$ 0.74 - 0.84 (subscales)  Cronbach $\alpha$ 0.90 (for 2 items only)	<i>Construct:</i> Confirmatory factor analysis showed to 32 items  <i>Criterion:</i> correlation with Self-esteem ( $r = 0.47$ ) and Self-directed ( $r =$



Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			Scoring method: 5-point scale (from extremely disagree) to extremely agree).		0.50) learning tools ( $p < 0.001$ )
<b>Clinical Evaluation Form (CEF)</b>					
Porter et al. (2011) Australia	178 students (1 <sup>st</sup> and 2 <sup>nd</sup> year)	Orientation  Clinical Educator/Teacher  Ward Staff and Environment  Clinical Hurdles  University	21-items  5 domains: orientation (3 items), clinical educator/teacher (5 items), ward staff and environment (4 items), clinical hurdles (4 items), and university (5 items)  Information on how to complete the tool  Items relating to clinical placement venue and student year  Scoring method: 5	Cronbach $\alpha$ 0.90 (overall)  Cronbach $\alpha$ 0.73-0.91 (subscales)	<i>Face and content:</i> literature review on clinical evaluation tools, university's tool, expert panel pre-testing on 6 student nurses in 1 and 2 year level expert panel;  <i>Construct:</i> not reported;  <i>Criterion:</i> not reported

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			point scale of 1 =never to 5 = always		
<b>Clinical Learning Environment Diagnostic Inventory</b>					
Hosoda (2006) Japan	312 students (Junior and Senior) and 157 preceptors	Affective  Perceptual  Symbolic  Behavioural  Reflective	21 items  five domains  Scoring method: 5- point Likert scale (from 1 = strongly disagree to 5 = strongly agree)	Cronbach $\alpha$ 0.84 (overall)  Cronbach $\alpha$ 0.67- 0.77 (subscales)  <i>Test-retest</i> : three week ( $n=91$ ) = 0.59- 0.74 ( $p < 0.01$ )	<i>Face</i> : panel of expert nurse educators  <i>Content</i> : literature, qualitative interviews (20 students and 14 preceptors), pilot study  <i>Construct</i> : Factor analysis  <i>Criterion</i> : used CLES scale (Saarikoski and Leino-Kilpi 2002): Total scores $r =$ 0.76 (CLEDI and CLES); $r = 0.39$ - 0.74 between the

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
					total CLEDI score and CLES subscales, all correlations at $p < 0.01$
<b>Clinical Learning Environment Inventory (CLEI)</b>					
Chan (2001a, 2001b, 2003) Australia	108 Second year students	Individualization  Innovation  Involvement, Personalization  Task Orientation  Student Satisfaction	42-item  six sub-scales (7 items per scale)  Two Versions (actual and preferred)  Scoring method: 5- point Likert scale (5=strongly agree 4=agree 3=omitted/invalid responses 2=disagree 1=strongly disagree); Total scoring from 7- 35  Reverse scoring for negatively worded	Actual: Cronbach $\alpha$ 0.73-0.84 (subscales)  Preferred: Cronbach $\alpha$ 0.68-0.80 (subscales)  Excludes satisfaction scale	<i>Face:</i> nurse educators and clinicians experts  <i>Content:</i> literature review  <i>Criterion:</i> discriminant validity

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			items		
Midgley (2006) England	67 students in adult branch cohort	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items  Actual and preferred versions  Scoring method: 5- point Likert scale (3=omitted/invalid responses)  Reverse scoring for negatively worded items	not reported	not reported
Ip and Chan (2005); Chan and Ip (2007) Hong Kong	281 students (actual) and 243 students (preferred); all year levels	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items  six sub-scales (7items per scale)  Two versions: actual and preferred forms  5-point Likert scale (3=omitted/invalid responses)  Reverse scoring for	Actual: Cronbach $\alpha$ 0.50 - 0.80 (subscales)  Preferred: Cronbach $\alpha$ 0.51 - 0.76 (subscales)	<i>Construct.</i> Pearson correlation analysis - association between student satisfaction and the other 5 domains of the actual CLEI ( $r =$ 0.31-0.54, $p <$ 0.001)

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			negatively worded items		
Henderson et al (2006) Australia	First, second and third year ( $n = 389$ students)	Same as the original tool (Chan 2001a, 2001b, 2003)	42 items (Actual form only)  Scoring method: 4-point scale (1=strongly disagree 2=disagree 3=agree 4=strongly agree)	Cronbach $\alpha$ 0.62 - 0.88 (subscales)	not reported
Peril and Brugnolli (2009) Italy	First, second and third year students ( $n = 232$ )	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items  six sub-scales  Two versions: actual and preferred  Scoring method: 5-point Likert scale  Reverse scoring for negatively worded items	Cronbach $\alpha$ 0.47 - 0.74 (subscales); Cronbach $\alpha$ 0.63 - 0.76 (based by year of study)	<i>Face</i> : professional translators ( $n = 3$ ) <i>Content</i> : panel of experts
Smedley and Morey (2010) Australia	Senior students 55 (actual) and 38 (preferred)	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items  Two versions (actual	not reported	not reported

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			and preferred)  4-point Likert scale; Omitted/invalid response (score 3) excluded in analysis		
Newton et al (2010) Australia	Second and third year students ( $n = 513$ )	Same as the original tool (Chan 2001a, 2001b, 2003)	Actual form only  42-items  Scoring method: 4-point Likert scale(from strongly agree to strongly disagree)  Negative items were reverse-scored	Cronbach $\alpha$ 0.46 - 0.88 (subscales)	<i>Construct</i> : factor analysis: 6 factors identified but 2 items removed; confirmed 40-items with 6 factors some differences to original tool
Berntsen and Bjørk (2010) Norway	74 first-year students	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items (Actual version)  6 sub-scales  Scoring method: 5-	Cronbach $\alpha$ 0.43 - 0.86 (subscales)	<i>Construct</i> : simple bivariate correlations shows correlation between satisfaction scale

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			point Likert scale but used 4-point Likert scale for analysis (omitted/invalid scored 3)  Reversed scoring for negative items		and other five scales ( $r = 0.373 - 0.516$ ; $p < 0.005$ ); multiple correlation suggests correlation between satisfaction scale and other scales of Actual CLEI ( $r = 0.68$ ; $p < 0.005$ ).
Alraja 2011 Canada	61 fourth year students	Same as the original tool (Chan 2001a, 2001b, 2003)	42-items  Actual and preferred versions  Scoring method: 5-point Likert scale	Actual Cronbach $\alpha$ 0.41 - 0.74 (subscales)  Preferred Cronbach $\alpha$ 0.48 - 0.77 (subscales)	None reported
Bjørk et al. (2014) Norway	184 final year students	Same as the original tool (Chan 2001a, 2001b, 2003)	Actual form only: 42-items; 6 sub-scales  Scoring method: 4-point Likert scale for analysis, for data collection a 5-point	Cronbach $\alpha$ 0.46 - 0.92 (subscales)	not reported

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			Likert scale with omitted/invalid responses scored 3; negative items are reversed in scoring		
Papathanasiou et al. 2014 Greece	196 students (fifth semester = 77, seventh semester = 53, eighth (final) semester = 66)	Same as the original tool (Chan 2001a, 2001b, 2003)	Actual and Preferred version; 42-items 7-items in each sub-scale; 6 sub-scales  Scoring method: Likert four-point scale (incomplete/incorrect = 3.	Cronbach $\alpha$ 0.55 - 0.76 (actual subscales)  Cronbach $\alpha$ 0.58 - 0.77 (preferred subscales)	<i>Construct:</i> satisfaction correlated with other five scales $r = 0.42 - 0.60$ ( $p = 0.000$ ) (Actual) but Individualization $r = 0.18$ ( $p = 0.014$ )
<b>Clinical Learning Environment Scale (CLE scale)</b>					
Dunn and Burnett (1995) Australia	Total of 423 individuals (90% student nurses across a three- year programme and 10% clinical facilitators)	Staff-student relationships  Nurse manager commitment	23-items, five subscales  Scoring method: 5-point Likert scale	Cronbach $\alpha$ 0.63-0.85 (sub-scales)	<i>Face:</i> review by 12 expert nurse educators  <i>Content:</i> pilot study <i>Construct:</i>



Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
		Patient relationships  Interpersonal relationships  Student satisfaction			factor analysis.
Dunn and Hansford (1997) Australia	229 students (second and third years)	Staff-student relationships  Nurse manager commitment  Patient relationships  Hierarchy and ritual  Student satisfaction	23-items, five subscales  Scoring method: not reported	reliability done but not reported	<i>Construct:</i> factor analysis; inter- scale correlation
Saarikoski et al. (2005) Finland	416 student nurses	Same as Dunn and Hansford (1997)	23-items  Scoring method: 5- point Likert scale	Cronbach $\alpha$ 0.75 (overall)  Cronbach $\alpha$ 0.53- 0.90 (subscales)	<i>Face:</i> translation by a nurse educator  <i>Construct:</i> factor analysis  <i>Criterion:</i> used

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
					Clinical Learning Environment and Supervision scale
<b>Clinical learning environment and supervision (CLES)</b>					
Saarikoski and Leino- Kilpi (2002) Finland	Second and third year nursing students ( <i>N</i> =416)	Ward atmosphere  Leadership style of the ward manager  Premises of nursing care  Premises of learning  Supervisory relationship	27-items; 5 sub- divisions  Scoring method: 5- point Likert-type scale: 1=fully disagree; 2=disagree to some extent; 3=neither agree nor disagree; 4=agree to some extent; 5=fully agree  Open-ended question	Cronbach $\alpha$ 0.73- 0.94 (subscales)	<i>Content:</i> literature review, pilot study and clinical teachers  <i>Face:</i> expert panel;  <i>Construct:</i> factor analysis
Saarikoski et al (2002) England and Finland	Second and third year student nurses (416 Finland and 142 UK)	Same as Saarikoski and Leino-Kilpi (2002)	27-items; 5 sub- divisions  Scoring method: 5- point Likert-type	Cronbach $\alpha$ sub- scales $\alpha$ =0.74-0.95 (subscale); satisfaction scale $\alpha$ = 0.78	not reported

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			scale		
Saarikoski et al (2005) Finland	416 student nurses	Same as Saarikoski and Leino-Kilpi (2002)	27-items  5 sub-divisions  Scoring method: 5- point Likert-type scale	Cronbach $\alpha$ 0.86 (overall); Cronbach $\alpha$ 0.73-0.95 (subscales)	<i>Construct:</i> factor analysis confirmed the five-factor structure  <i>Criterion:</i> used the CLE scale (Dunn and Hansford 1997)
Hosoda (2006) Japan	110 students	Same as Saarikoski and Leino-Kilpi (2002)	27-items  5 sub-divisions  Scoring method: not reported	Cronbach $\alpha$ 0.72- 0.93 (subscales)	not reported
Papastavrou et al (2010) Cyprus	645 students across year levels	Same as Saarikoski and Leino-Kilpi (2002)	27-items;  5 sub-divisions  Scoring method: 5- point Likert-type scale	Cronbach $\alpha$ ( $n=350$ ) $\alpha=0.95$ (overall)  Cronbach $\alpha$ 0.79- 0.95 ( $n=350$ ) (subscales)	<i>Construct:</i> factor analysis ( $n=$ 350)

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
De Witte et al (2011) Belgium	768 students across year levels	Same as Saarikoski and Leino-Kilpi (2002)	31-items; 5 sub-divisions  Scoring method: Likert scale (from fully disagree to fully agree)	Cronbach $\alpha$ 0.970 (overall)  Cronbach $\alpha$ 0.801-0.956 (subscales)	<i>Face:</i> pilot study and experts  <i>Content:</i> literature review, experts and Content Validity Index  <i>Construct:</i> factor analysis
<b>Abbreviated Clinical Learning Environment Inventory - 19 (CLEI – 19)</b>					
Salamonson et al (2011) Australia	231 students across year groups	The clinical facilitator Students' satisfaction with clinical placement	19-items; 10 positively worded items and 9 negatively worded items  Scoring method: 5-point Likert scale (Total scoring ranging from 19-95)  Reverse scoring for negatively worded items	Cronbach $\alpha$ 0.93 (overall)  Cronbach $\alpha$ 0.92 - 0.94 (subscales)	<i>Construct:</i> factor analysis and Discriminant validity based on linear regression analysis

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
<b>Clinical learning environment, supervision and nurse teacher scale (CLES+T scale)</b>					
Saarikoski et al (2008) Finland	549 student nurses	Pedagogical atmosphere on the ward  Leadership style of the ward manager  Premises of nursing on the ward  Supervisory relationship  Role of the nurse teacher	34 items  Absence of negative responses  Scoring method: 5-point Likert scale (from fully disagree to fully agree)	Cronbach $\alpha$ 77-0.96 (subscales)	<i>Content</i> : literature review, empirical studies, audit instruments and scholarly papers  <i>Construct</i> : factor analysis
Saarikoski et al (2009) Finland	549 student nurses across all the year groups	Role of the nurse teacher scale  Students' total satisfaction	9 items (role of NT)  Satisfaction (3 items)  Scoring method: 5-point Likert scale	Role of the nurse teacher Cronbach $\alpha$ 0.88 (overall)  Cronbach $\alpha$ 0.81-0.91 (subscales: Role of NT)	<i>Content</i> : literature review
Johansson et al (2010) Sweden	324 students from first-, second- and third-year	Same as Saarikoski et al., (2008)	34-item scale	Cronbach $\alpha$ 0.95 (overall)	<i>Face</i> : expert panel of nurse educators and

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			<p>five subscales</p> <p>Students' total satisfaction scale added</p> <p>Scoring method: 5-point Likert-type scale</p>	<p>Cronbach <math>\alpha</math> 0.75-0.96 (subscales)</p> <p>Cronbach <math>\alpha</math> 0.87 (satisfaction subscale)</p>	<p>discussion with author of original instrument</p> <p><i>Construct:</i> factor analysis and Item-correlation analysis</p>
Warne et al (2010) Western European countries	1903 student nurses	Same as Saarikoski et al., (2008)	<p>34-item scale</p> <p>five subscales</p> <p>Students' total satisfaction scale added</p> <p>Scoring method: 5-point Likert-type scale</p>	<p>Cronbach <math>\alpha</math> 0.83-0.96 (subscales)</p> <p>Cronbach <math>\alpha</math> 0.79 (total satisfaction)</p>	<p><i>Content:</i> empirical studies, audit instruments and literature review; assessed by the instrument's author when there was back-translation</p>
Skaalvik et al (2011) Norway	511 students from first-, second- and third-year	Same as Saarikoski et al., (2008)	34-item scale	not reported	<i>Face:</i> panel of nurse educators and pilot study

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			five subscales  Background information  Scoring method: 5- point Likert-type scale		among 14 healthcare professional students; <i>Construct:</i> factor analysis
Bos et al (2012) Sweden	not reported	Same as Saarikoski et al., (2008)	34-item scale  five subscales  Background information  Scoring method: 5- point Likert-type scale	not reported	<i>Face:</i> expert panel of district nurses; <i>Construct:</i> based on factor analysis
Henriksen et al. (2012) Norway	407 students	Same as Saarikoski et al., (2008)	34-item scale  five subscales  Background	Cronbach $\alpha$ 0.85- 0.96 (subscales)  Corrected item-scale correlations range	<i>Content:</i> Translated by 2 independent bi- lingual translators;

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			information (10 items)  Scoring method: 5-point Likert-type scale	between 0.47-0.90;	evaluated by panel of university teachers; pre-tested on 14 health profession college students with clinical placement lead to refinement.  <i>Construct:</i> some differences from the original tool
Bergjan and Hertel (2013) Germany	240 students from first-, second-, and third-year	Pedagogical atmosphere on the ward  Leadership style of the ward manager  Premises of nursing on the ward  Supervisory	34-item scale  five subscales  A filter question was used to replace the domain 'role of the nurse teacher'  Scoring method: 5-point Likert-type	Cronbach $\alpha$ 0.82-0.96 (subscales)	<i>Content:</i> group of nurse teachers and nurse managers; 25 student nurses used to check for comprehensibility of the tool.  <i>Construct:</i> factor analysis; Satisfaction with



Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
		relationship	scale		clinical placement strongly correlated with 'supervisory relationship' (0.65) and ' pedagogical atmosphere' (0.74) at $p = 0.000$ .
Bisholt et al. (2014) Sweden	185 students	Same as Saarikoski et al., (2008)	34-item scale  Five subscales  one item added to measure student satisfaction  Scoring method: 5- point Likert-type scale	Cronbach $\alpha$ 0.95 (overall)  Cronbach $\alpha$ 0.70- 0.97 (subscales)	not reported
Carlson and Idvall (2014) Sweden	260 student nurses (76% response rate)	Same as Saarikoski et al., (2008)	34-item scale  five subscales	Cronbach $\alpha$ 0.95 (overall)  Cronbach $\alpha$ 0.76-	not reported

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			Background information  Scoring method: 5- point Likert-type scale	0.97 (subscales)	
Sundler et al. (2014) Sweden	185 student nurses in final term of nursing programme (89%)	Same as Saarikoski et al., (2008)	34-item scale  five subscales  three items on student satisfaction  Scoring method: 5- point Likert-type scale	Cronbach $\alpha$ 0.95 (overall)  Cronbach $\alpha$ 0.70- 0.97 (subscales)	
Watson et al. (2014) New Zealand	416 students	Same as Saarikoski et al., (2008)	34-item scale  five subscales  Scoring method: 4- point Likert-type	Cronbach $\alpha$ > 0.8	Face: expert panel consisting of nursing students (n = 3 third year), registered nurses as clinical

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			scale		supervisors, nurse manager, and nurse teacher  <i>Construct:</i> Factor analysis
Vizcaya-Moreno et al. (2015) Spain	370 student nurses in 3 <sup>rd</sup> year of degree programme	Same as Saarikoski et al., (2008)	34-item scale  five subscales  Scoring method: 5-point Likert-type scale	Cronbach $\alpha$ 0.95 (overall)  Cronbach $\alpha$ 0.80-0.97 (subscales)	<i>Content:</i> Expert panel to translate the tool and pilot tested but no modification required  <i>Construct:</i> factor analysis
<b>Quality Clinical Placement Evaluation (QCPE) Tool</b>					
Courtney-Pratt et al. (2013) Australia	48 student nurses and 47 nurses	not reported	17 items (supervising nurses)  21 items (student nurses)  Scoring method: 5-	Cronbach $\alpha$ 0.955 (student nurses - overall)  Cronbach $\alpha$ 0.927	<i>Face and content:</i> four experts  <i>Construct:</i> factor analysis

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			point Likert scale: 1 = strongly disagree and 5 = strongly agree  items positively worded	(nurses - overall)  <i>Test-retest:</i> no significant differences in mean scores between test one and two (student nurses) and 2 items had significant differences for the nurses survey	
<b>Questionnaire from Lee <i>et al.</i></b>					
Lee <i>et al.</i> (2009) Korea and USA	131 South Korea and 109 USA nursing students (Junior and Senior students only)	Clinical practice satisfaction dimension measure the sub-scales:  Content (11 items), teaching methods (5 items)  Environment (7 items)	52 items: 15 items (personal student characteristics), 7 items (nursing-related characteristics), 30 items (clinical satisfaction)  Scoring method: 4-point scale (ranging from 1 = very unsatisfied to 4 =	<i>Inter-item correlation analysis:</i> one item in the content sub-scale was deleted in the final analysis  Cronbach $\alpha$ 0.761 - 0.857 (subscales) for Clinical practice satisfaction scale	<i>Face:</i> nurse researchers

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
		Schedule (3 items) Evaluation (4 items)	very satisfied)		
<b>Questionnaire from Orton –Modified</b>					
Yung (1997) Hong Kong	140 certificate and 81 degree nursing students	Communication lines approachability (8 items)  Task/patient orientation (3 items)  Involvement in teaching (7 items)  Attitude to students (14 items)	32 items; two open- ended questions  Scoring method: 5- point Likert scale (strongly agree, agree, undecided, disagree and strongly disagree)  reverse scoring of some items	Cronbach $\alpha$ 0.55- 0.77 (subscales)	<i>Face:</i> nursing experts  <i>Content:</i> literature review and pilot study ( $n$ = 40 student nurses)
<b>Student evaluation of clinical education and environment (SECEE) inventory</b>					
Sand-Jecklin (2000) USA	319 nursing students across sophomore, junior and senior year	Communication  Learning opportunities  Learning support  Department	29 items  4 subscales  Scoring method: 5- point Likert scale from strongly agree to strongly disagree (four negative items)	Cronbach $\alpha$ 0.89- 0.94 (overall)  Cronbach $\alpha$ 0.59- 0.87 (subscales)  <i>Test-retest</i> reliability ranged 0.50-0.61 for same clinical	<i>Content:</i> literature, focus group interviews with senior students and nurse educators, course evaluations, pilot

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
		atmosphere	included for reversed coding)  Open-ended items included  sixth response option included 'can't answer'	placements ( $n = 46$ ) and -0.01 to 0.20 ( $n = 60$ ) for different placement sites	study
Sand-Jecklin (2009) USA	Total 2,700 students (from Sophomore, Junior, and Senior students)	Instructor facilitation of learning scale (11 items)  preceptor facilitation of learning scale (11 items)  learning opportunities scale (10 items)	32 items  3 subscales  open-ended questions  Scoring method: 5-point Likert scale (from strongly agree to strongly disagree with two negative worded items for reverse scoring)  Subscale scores range from 11 to 55	Cronbach $\alpha$ 0.94 (overall)  Cronbach $\alpha$ 0.82-0.94 (subscales)	<i>Content:</i> literature and 2000 study of SECEE inventory version 2  <i>Construct:</i> factor analysis; Between-subscale correlations ranged from 0.50-0.66

Instrument/References /Country	Sample	Concepts being measured	Instrument Description	Reliability	Validity
			for 2 subscales and 10-50 for one subscale  Open-ended items included		
<b>Ward learning climate</b>					
Orton (1981) England	325 student nurses (first-, second-, and third-year); 27 clinical nurse teachers and 44 ward sisters (Total of 396 respondents)	The ward climate and role of the ward sister in relation to student nurses learning	124 items  open-ended questions  scoring method: 5- point Likert scale (strongly disagree to strongly agree)	Not reported	<i>Content:</i> literature review, interviews;  <i>Construct:</i> exploratory factor analysis and correlational analysis

## Appendix B: Permission to conduct research from Principal

# BARBADOS COMMUNITY COLLEGE

(Established July, 1968)

PHONE: (246) 426-3186  
PBX: (246) 426-2858 Ext. 5222  
FAX: (246) 429-5935  
e-mail: [principal@bcc.edu.bb](mailto:principal@bcc.edu.bb)



"Eyre"  
Howell's Cross Road  
St Michael  
BARBADOS BB11058

*All correspondence should  
be addressed to the Principal*

Our Ref: P./5/18/08

Your Ref: .....

.....December 29, 2008.....

Mrs. Sonia Watson-Miller,  
2<sup>nd</sup> Avenue,  
Grazettes,  
St. Michael.

Dear Mrs. Watson-Miller,

Reference is made to your letter dated December 19, 2008 in which you requested permission to conduct research at the Barbados Community College in partial fulfillment of the requirements for your professional doctorate in Health.

You are hereby granted permission to conduct the research as indicated in your letter on condition of full confidentiality of all information and that anonymity of respondents is maintained.

I wish you success in your research and look forward to receiving a copy of the findings.

Yours sincerely,

Gladstone A. Best, Ph.D  
Principal

GAB/seg

copied to: Senior Tutor, Division of Health Sciences



## Appendix C: Permission to conduct research from University Research Ethics Committee



Bath BA2 7AY - United Kingdom  
Tel +44 (0)1225 386419 (Administrator)  
+44 (0)1225 383461 (Secretary)  
Fax +44 (0)1225 383833

Sonia Watson-Miller  
2<sup>nd</sup> Avenue Grazeilles  
St. Michael  
Barbados BB12035  
West Indies

23<sup>rd</sup> July 2009

Dear Sonia,

**Full title of study:** Students perceptions of the Clinical Learning Environment: a study of Barbadian student nurses using a mixed-methods analysis

**SREAP reference number:** EP 08/09 135

The School for Health Research Ethics Approval Panel (SREAP) reviewed the above application at its meeting held on 10<sup>th</sup> June 2009.

### Confirmation of ethical opinion

On behalf of the Panel, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation.

### Approved documents

Document	Version/Date
SREAP Annex 1	Paper EP 08/09 126
SREAP Annex 2	Paper EP 08/09 126 (25.04.2009 / 26.04.2009)
SREAP Annex 4	Paper EP 08/09 126 (06.05.2009 / 26.04.2009)
Appendix 1: CLES+T instrument with demographic information	Paper EP 08/09 126
Appendix 2: CLEI instrument	Paper EP 08/09 126
Response to SREAP concerns following 13.05.2009 meeting	Paper EP 08/09 133 (24.05.2009)
Participant information sheet (for surveys)	Paper EP 08/09 133
Participant information sheet (for interviews)	Paper EP 08/09 133

### Membership of the Committee

The following members of the Committee were present at the meeting:

Name	Profession	Present
Dr Gordon Taylor	Medical Statistician (Committee Chair)	Yes
Rev Angela Berners-Wilson	University Chaplain	Yes
Dr Christina Maslen	Teaching Fellow, School for Health	Yes
Dr Cliff Stevens	Reader, School for Health	Yes
Dr Andrea Taylor	Director of Studies, Pharmacy and Pharmacology	No

Also in attendance:

Name	Position (or reason for attending)
Dr Vicki Buckley	Committee Secretary

### After ethical review

Please inform SREAP about any substantial amendments made to the study if they have ethical implications.

With the Committee's best wishes for the success of this project

Yours sincerely

Dr Gordon Taylor  
Chair of SREAP

## Appendix D: Permission letter from Professor Chan to use instrument

Prof Dominic Chan  
Nethersole School of Nursing  
The Chinese University of Hong Kong  
Shatin, NT  
Hong Kong

19<sup>th</sup> October 2009.

Sonia Watson-Miller  
2<sup>nd</sup> Avenue Grazettes  
St Michael BB12035  
Barbados  
West Indies

Dear Sonia

As the author of the Clinical Learning Environment Inventory, CLEI, I write to grant you permission to use the CLEI solely for your study. You also have my permission to make modifications to the tool to suit your clinical environment, if necessary. I would appreciate the usual respect for copyright with acknowledgement of my authorship of the CLEI in all future related publications and presentations.

Best wishes



Dominic Chan

## Appendix E: Permission letter from Dr. Saarikoski to use instrument

Mikko Saarikoski  
RN, PhD, post-doc researcher  
e-mail: [mikko.saarikoski@turkuamk.fi](mailto:mikko.saarikoski@turkuamk.fi)  
Postal address:  
Leppätie 13  
FIN - 20 720 Turku  
Finland

Agreement form

15.04.2008

### Agreement for using the Clinical Learning Environment, Supervision and Nurse Teacher (*CLESplusT*) evaluation scale

I agree to abide by the following principles in using the *CLESplusT* evaluation scale as a research tool in my/our empirical study:

- The CLES should only be used in its original form (minor alternations are permissible, for example in order to ensure the terminology of *CLES* reflects different cultural aspects). All such changes should be reported to the authors.
- Any research reports that have used the *CLES* should acknowledge the original source by using the following reference: Saarikoski et al. 2008. The nurse teacher in clinical practice: Developing the new sub-dimension to the Clinical Learning Environment and Supervision (*CLES*) scale. International Journal of Nursing Studies 45: 1233-1237.
- The instrument cannot be published in its original form (e.g. as Appendix) without the permission of the copyright holder, Elsevier Science Ltd. UK. The *CLESplusT* was published originally in the above article.
- Authors should be sent one copy of publications in which the *CLESplusT* has been used as a research instrument (see the address above)

Name of the re-user:

SONIA WATSON-MILLER

Sonia Watson Miller  
your signature

Research organisation:

University of Bath

Address:

School for Health  
University of Bath  
Bath BA2 7AY, United Kingdom

Name of the research  
(or research project)

Students' perceptions of the Clinical Learning Environment  
& study of Barbadian student nurses using a  
mixed-methods analysis.

Language version:

English

I give the permission:

Mikko Saarikoski  
Mikko Saarikoski

Date:

Turku 7.12.2008

Please, complete to inform us about your research and send two signed copies form to the address above. A signed permission form will be returned to you.

## Appendix F: Itemised layout in each scale of the CLEI and scoring

Scale	<i>Questionnaire number</i>
Personalisation	1, 7, 13, 19, <u>25</u> , <u>31</u> , <u>37</u>
Student Involvement	<u>2</u> , 8, <u>14</u> , 20, <u>26</u> , 32, <u>38</u>
Satisfaction	3, <u>9</u> , 15, <u>21</u> , <u>27</u> , 33, 39
Task Orientation	4, 10, <u>16</u> , <u>22</u> , 28, 34, 40
Innovation	<u>5</u> , <u>11</u> , 17, 23, <u>29</u> , 35, <u>41</u>
Individualization	<u>6</u> , 12, 18, 24, 30, <u>36</u> , <u>42</u>

### Scoring:

Items are scored 5, 4, 2, and 1, respectively for the responses SA, A, D, and SD. Items marked with **R** are scored in the reverse manner. Omitted or invalidly answered items are scored 3.

## Appendix G: Clinical Learning Environment Inventory (CLEI): Current Form

### Student Questionnaire

Dear Student,

Please read the below directions and kindly complete all the following information.

#### **Demographic Information**

What is your age range?

1. Under 20 years
2. 21-30 years
3. 31-40 years
4. 41 or over

What is your gender?

1. Male
2. Female

What is your current academic class?

1. Year 2
2. Year 3

Please circle the ward/unit of your **MOST RECENT** clinical placement at the QEH. **Circle ONE ONLY.**

1. Medical ward
2. Surgical ward
3. Paediatric ward
4. Gynaecological ward (B4)
5. Oncology ward (C12)
6. Surgical Intensive Care Unit
7. Medical Intensive Care Unit
8. Artificial Kidney Unit
9. Operating Theatre
10. Recovery Room
11. Orthopaedic ward (B5)
12. Other, specify .....

Do you have any previous professional qualification in nursing? E.g. nursing assistant

1. Yes

2. No

If yes, specify: .....

The purpose of this questionnaire is to find out your opinion about your **MOST RECENT** placement area at the Queen Elizabeth hospital. This form of the questionnaire assesses your opinion about what this clinical placement is **CURRENTLY** like. Indicate your opinion about each statement that describes what this clinical placement is **CURRENTLY** like, by **circling**:

- SA if you STRONGLY AGREE  
A if you AGREE  
D if you DISAGREE  
SD if you STRONGLY DISAGREE

		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The supervising registered nurse considers students feelings.	SA	A	D	SD
2.	The supervising registered nurse talks rather than listens to the students.	SA	A	D	SD
3.	Students look forward to coming to clinical placement.	SA	A	D	SD
4.	Students know exactly what has to be done in the clinical setting.	SA	A	D	SD
5.	New ideas are seldom tried out in this clinical setting.	SA	A	D	SD
6.	All students in the clinical setting are expected to do the	SA	A	D	SD

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	same work in the same way.				
7.	The supervising registered nurse talks individually with students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
8.	Students put effort into what they do in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
9.	Students are dissatisfied with what is done in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
10.	Getting a certain amount of work done is important in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
11.	New and different ways of teaching to students are seldom used in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
12.	Students are generally allowed to work at their own pace.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
13.	The supervising registered nurse goes out of his/her way to help students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
14.	Students “clock watch” in this clinical setting (can’t wait till the end of the shift)	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
15.	After the shift, the students have a sense of satisfaction.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
16.	The supervising registered nurse often gets sidetracked instead of sticking to the point.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
17.	The supervising registered nurse thinks up innovative activities for students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
18.	Students have a say in how	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	the shift is spent.				
19.	The supervising registered nurse helps the student who is having trouble with the work.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
20.	Students in this clinical setting pay attention to what others are saying.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
21.	This clinical placement is a waste of time.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
22.	This is a disorganized clinical placement.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
23.	Teaching approaches in this clinical setting are characterized by innovation and variety.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
24.	Students are allowed to negotiate their work load in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
25.	The supervising registered nurse seldom goes around to the clinical setting to talk to students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
26.	Students have little opportunity to involve with the process of handing over to staff for the next shift.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
27.	This clinical placement is boring.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
28.	Clinical assignments are clear so that students know what to do.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
29.	The same clinical staff member works with the students for most of this	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>



		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	placement.				
30.	Teaching approaches allow students to proceed at their own pace.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
31.	The supervising registered nurse is not interested in students' problem.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
32.	There are opportunities for students to express opinions in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
33.	Students enjoy coming to this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
34.	Students are often punctual.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
35.	The supervising registered nurse often thinks of interesting activities for the students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
36.	There is little opportunity for students to pursue his/her particular interest in this setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
37.	The supervising registered nurse is unfriendly and inconsiderate towards students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
38.	The supervising registered nurse dominates debriefing/discussion sessions.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
39.	The clinical placement is interesting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
40.	Workload allocation in this clinical setting is carefully	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	planned.				
41.	Students seem to do the same type of tasks in every shift.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
42.	It is the supervising registered nurse who decides the students' activities in this setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

**Thank you for your time and help!**

## Appendix H: Clinical Learning Environment Inventory (CLEI): Desired Form

### Student Questionnaire

#### Directions

The purpose of this questionnaire is to find out your opinion about your **MOST RECENT** clinical placement area at the Queen Elizabeth hospital.

#### **Demographic Information**

What is your age range?

1. Under 20 years
2. 21-30 years
3. 31-40 years
4. 41 or over

What is your gender?

1. Male
2. Female

What is your current academic class?

1. Year 2
2. Year 3

Please circle the ward/unit of your **MOST RECENT** clinical placement. **Circle ONE ONLY.**

1. Medical ward
2. Surgical ward
3. Paediatric ward
4. Gynaecological ward (B4)
5. Oncology ward (C12)
6. Surgical Intensive Care Unit
7. Medical Intensive Care Unit
8. Artificial Kidney Unit
9. Operating Theatre
10. Recovery Room
11. Orthopaedic ward (B5)
12. Other, specify .....

Do you have any previous professional qualification in nursing? E.g. nursing assistant

1. Yes

2. No

If yes, specify: .....

This questionnaire assesses your opinion about what you **DESIRED** for this clinical placement to be like. Indicate your opinion about each statement that describes what you **DESIRED** this clinical placement to be like, by **circling**:

SA if you STRONGLY AGREE

A if you AGREE

D if you DISAGREE

SD if you STRONGLY DISAGREE

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. The supervising registered nurse would consider students feelings.	SA	A	D	SD
2. The supervising registered nurse would talk rather than listens to the students.	SA	A	D	SD
3. Students would look forward to coming to clinical placement.	SA	A	D	SD
4. Students would know exactly what has to be done in the clinical setting.	SA	A	D	SD
5. New ideas would be seldom tried out in this clinical setting.	SA	A	D	SD
6. All students in the setting would be expected to do the same work in the same way.	SA	A	D	SD
7. The supervising registered nurse would talk individually	SA	A	D	SD

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	with students.				
8.	Students would put effort into what they do in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
9.	Students would be dissatisfied with what is done in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
10.	Getting a certain amount of work done would be important in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
11.	New and different ways of teaching to students would seldom be used in the clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
12.	Students would generally be allowed to work at their own pace.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
13.	The supervising registered nurse would go out of his/her way to help students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
14.	Students would “clock watch” in this clinical setting (can’t wait till the end of the shift)	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
15.	After the shift, the students would have a sense of satisfaction.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
16.	The supervising registered nurse would often get sidetracked instead of sticking to the point.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
17.	The supervising registered nurse would think up innovative activities for students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
18.	Students would have a say in	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	how the shift is spent.				
19.	The supervising registered nurse would help the student who is having trouble with the work.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
20.	Students in this clinical setting would pay attention to what others are saying.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
21.	This clinical placement would be a waste of time.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
22.	This would be a disorganized clinical placement.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
23.	Teaching approaches in this setting would be characterized by innovation and variety.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
24.	Students would be allowed to negotiate their work load in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
25.	The supervising registered nurse would seldom go around to the clinical setting to talk to students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
26.	Students would have little opportunity to be involved with the process of handing over to staff for the next shift.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
27.	This clinical placement would be boring.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
28.	Clinical assignments would be clear so that students know what to do.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
29.	The same clinical staff member would work with the students for most of this placement.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
30.	Teaching approaches would allow students to proceed at their own pace.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
31.	The supervising registered nurse would not be interested in students' problem.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
32.	There would be opportunities for students to express opinions in this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
33.	Students would enjoy coming to this clinical setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
34.	Students would often be punctual.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
35.	The supervising registered nurse would often think of interesting activities for the students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
36.	There would be little opportunity for students to pursue his/her particular interest in this setting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
37.	The supervising registered nurse would be unfriendly and inconsiderate towards students.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
38.	The supervising registered nurse would dominate debriefing/discussion sessions.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
39.	The clinical placement would be interesting.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
40.	Workload allocation in this clinical setting would be carefully planned.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
41.	Students would do the same type of tasks in every shift.	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
42.	It would be the supervising	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>

**Strongly Agree   Agree   Disagree   Strongly Disagree**

registered nurse who decides  
the students' activities in this  
setting.

**Thank you for your time and help!**



**Appendix I: Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale**

**Student Questionnaire**

Dear Student,

***Please DO NOT write your name or student number on the questionnaire.***

Please read the following statements. For each statement, please circle the option that best describes your opinion.

**Demographic Information**

What is your age range?

1. Under 20 years
2. 21-30 years
3. 31-40 years
4. 41 or over

What is your gender?

1. Male
2. Female

What is your current academic class?

1. Year 2
2. Year 3

Please circle the ward/unit of your **MOST RECENT** clinical placement at the QEH. **Circle ONE ONLY.**

1. Medical ward
2. Surgical ward
3. Paediatric ward
4. Gynaecological ward (B4)
5. Oncology ward (C12)
6. Surgical Intensive Care Unit
7. Medical Intensive Care Unit
8. Artificial Kidney Unit
9. Operating Theatre
10. Recovery Room
11. Orthopaedic ward (B5)
12. Other, specify .....

Do you have any previous professional qualification in nursing? E.g. nursing assistant

1. Yes

2. No

If yes, specify: .....

**Satisfaction with clinical placement**

I am satisfied with the clinical placement that has just ended

1      2      3      4      5

**CLINICAL LEARNING ENVIRONMENT, SUPERVISION AND NURSE  
TEACHER (CLES+T) evaluation scale**

**(Saarikoski & Leino-Kilpi 2008)**

The following statements concerning the learning environment, supervision and the role of clinical instructor are grounded into main areas, each with their own title.

Circle the responses that **BEST** describe your **MOST RECENT** clinical placement area.

**Evaluation scale:**

**1 = fully disagree**

**2 = disagree to some extent**

**3 = neither agree nor disagree**

**4 = agree to some extent**

**5 = fully agree**

**The learning environment**

**The atmosphere:**

The staff were easy to approach

1       2       3       4       5

I felt comfortable going to the ward at the start of the shift

1       2       3       4       5

During staff meetings (e.g. before shifts) I felt comfortable taking part in the discussions

1       2       3       4       5

There was a positive atmosphere on the ward

1       2       3       4       5

The staff were generally interested in student supervision

1       2       3       4       5

The staff learned to know the student by their personal name

1       2       3       4       5

There were sufficient meaningful learning situations on the ward

1       2       3       4       5

The learning situations were multi-dimensional in terms of content

1       2       3       4       5

The ward can be regarded as a good learning environment

1       2       3       4       5

### Leadership style of the ward sister:

The WM regarded the staff on her/his ward as a key resource

1      2      3      4      5

The WM was a team member

1      2      3      4      5

Feedback from the WM could easily be considered  
as a learning situation

1      2      3      4      5

The effort of individual employees was appreciated

1      2      3      4      5

### Nursing care on the ward

The wards nursing philosophy was clearly defined

1      2      3      4      5

Patients received individual nursing care

1      2      3      4      5

There were no problems in the information flow related  
to patients' care

1      2      3      4      5

Documentation of nursing (e.g. nursing plans, daily recording of  
nursing procedures etc.) was clear

1      2      3      4      5

### The supervisory relationship

*In this form, the concept of **supervision** refers guiding, supporting and assessing  
of student nurses made by clinical staff nurses. Supervision can occur as  
individual supervision, or as group (or team) supervision.*

Occupational title of supervisor:

Nurse 1

Nurse specialist 2

Assistant ward manager 3

Sister/ward manager 4

Other, what? \_\_\_\_\_

**Occurrence of supervision:** (circle ONE only)

- I did not have a supervisor at all 1
- A personal supervisor was named, but the relationship with this person did not work during placement 2
- The supervisor changed during the placement, even though no change had been planned 3
- Supervisor varied according to shift or place of work 4
- Same supervisor had several students and was a group supervisor rather than an individual supervisor 5
- A personal supervisor was named and our relationship worked during this placement 6
- Other method of supervision, please specify?.....

How often did you have **separate private unscheduled supervision with the supervisor** (without the clinical instructor):

- Not at all 1
- Once or twice during the course 2
- Less than once a week 3
- About once a week 4
- More often 5

**The content of supervisory relationship:**

The following statements concern the supervisory relationship.

For each statement, please circle the option that **BEST Evaluation scale:** describe your **MOST RECENT** clinical placement area.

- 1 = fully disagree**  
**2 = disagree to some extent**  
**3 = neither agree nor disagree**  
**4 = agree to some extent**  
**5 = fully agree**

My supervisor showed a positive attitude towards supervision  
1      2      3      4      5

I felt that I received individual supervision  
1      2      3      4      5

I continuously received feedback from my supervisor  
1      2      3      4      5

Overall I am satisfied with the supervision I received

1      2      3      4      5

The supervision was based on a relationship of equality and promoted my learning

1      2      3      4      5

There was a mutual interaction in the supervisory relationship

1      2      3      4      5

Mutual respect and approval prevailed in the supervisory relationship

1      2      3      4      5

The supervisory relationship was characterized by a sense of trust

1      2      3      4      5

For each statement, please circle the option that **BEST** describe your **MOST RECENT** clinical placement area.

**Evaluation scale:**

**1 = fully disagree**

**2 = disagree to some extent**

**3 = neither agree nor disagree**

**4 = agree to some extent**

**5 = fully agree**

### **Role of the clinical instructor**

#### **Clinical instructor as enabling the integration of theory and practice:**

In my opinion, the clinical instructor was capable to integrate theoretical knowledge and everyday practice of nursing

1      2      3      4      5

The instructor was capable to operationalise the learning goals of this clinical placement

1      2      3      4      5

The clinical instructor helped me to reduce the theory-practice gap

1      2      3      4      5

#### **Cooperation between clinical placement and clinical instructor:**

Clinical instructor was like a member of the nursing team

1      2      3      4      5

Clinical instructor was capable to give his or her pedagogical expertise to the clinical team

1      2      3      4      5

The clinical instructor and the clinical team worked together in supporting my learning

1      2      3      4      5

### **Relationship among student, supervising registered nurse and clinical instructor**

The common meetings between myself, supervising registered nurse and clinical instructor were comfortable

1       2       3       4       5

In our common meetings I felt that we are colleagues

1       2       3       4       5

Focus of the meetings was on my learning needs

1       2       3       4       5

-----

**Thank you for your time and help!**

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## **Appendix J: Participant information sheet for the questionnaire survey**



### **School for Health**

University of Bath

Bath BA2 7AY

United Kingdom

This is a research study for a Doctorate in Health at the University of Bath. The title of the research study is:

**Students' perceptions of the Clinical Learning Environment: a study of Barbadian Student Nurses using a Mixed-Methods Analysis.**

The research study is being conducted by Sonia Watson-Miller.

### **Research Participant Information Sheet**

#### **Introduction**

You have been invited to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask me anything that is unclear or if you would like more information.

#### **Purpose of the study**

The purpose of this research is to explore and describe student nurses' perceptions of the acute hospital clinical learning environment in Barbados.



### **Why have I chosen you?**

You have been chosen to take part in this study because you are a student nurse attached to the acute hospital for clinical placement. The Principal has agreed to this research being carried out in the college. The School for Health Research Ethics Approval Panel, University of Bath has reviewed and granted ethics clearance for this project.

### **Do I have to take part?**

Your participation in this survey study is completely **VOLUNTARY** and you have the right to refuse to be in the study. If you refuse to participate in the study there will be no implications for you as an individual or to your nursing studies. If you agree to participate, consent is given once the questionnaire are completed and returned. Therefore, you will not be able to withdraw after the submission of the completed questionnaires.

### **What do I have to do?**

To take part in this research you are being asked to complete the questionnaires provided. The completed questionnaires are to be place in the box provided in the Nursing Department.

### **What will happen to the results of the research study?**

The answers given cannot be traced back to the student that filled in the forms. All information is recorded anonymously and therefore your clinical grades will not be affected. The data will be accessed by my supervisors and me. The data would be stored on the computer at home, secured by a password. Completed questionnaires would be stored in a locked filing cabinet. The results of the research study will be submitted in my dissertation. In addition the research will be published in academic journals concerned with nursing education and the findings will be presented at conferences. Summary of the research findings will be made available to the Principle and Head of the Division and Nursing

Department when the research is completed. Additionally, a summary of the results will be made available to the students through the College's newsletter.

**Benefits of the study:**

There is no personal benefit for the student. The information will be used to provide nursing educators with an understanding of the overall clinical learning environment so to encourage a positive learning environment.

**Risks:**

There is no foreseeable risk or discomforts associated with this study.

**Confidentiality:**

All information is recorded anonymously and therefore your clinical grades will not be affected. Please note the data collected will be used for research purposes only.

**Contact for further information**

Sonia Watson-Miller

Nursing Department, Barbados Community College, St. Michael.

Tel: 426-2858

Email: christeen70@hotmail.com

## **Appendix K: Participant information sheet for the qualitative interviews**



### **School for Health**

University of Bath

Bath BA2 7AY

United Kingdom

This is a research study for a Doctorate in Health at the University of Bath. The title of the research study is:

**Students' perceptions of the Clinical Learning Environment: a study of Barbadian Student Nurses using a Mixed-Methods Analysis.**

The research study is being conducted by Sonia Watson-Miller.

### **Research Participant Information Sheet**

#### **Introduction**

You have been invited to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask me anything that is unclear or if you would like more information.

### **Purpose of the study**

The purpose of this research is to explore and describe student nurses' perceptions of the acute hospital clinical learning environment in Barbados.

### **Why have I chosen you?**

You have been chosen to take part in this study because you are a student nurse attached to the acute hospital for clinical placement. The Principal has agreed to this research being carried out in the college. The School for Health Research Ethics Approval Panel, University of Bath has reviewed and granted ethics clearance for this project.

### **Do I have to take part?**

Your participation in this study is completely **VOLUNTARY** and you have the right to refuse to be in the study. If you refuse to participate in the study there will be no implications for you as an individual or to your nursing studies. You can choose to withdraw consent at anytime during the interview or after the interview when the transcript from your interview is being analysed.

### **What do I have to do?**

You are invited to participate in an individual face-to-face interview, which will be audio-taped. You will be invited to talk about your clinical experience(s) based on topics developed from the survey conducted prior to this study. The venue for the interview will be the Barbados Community College Conference Room or your home, whichever is more comfortable for you. It is anticipated that the interview will be of approximately one to two hours in duration.

### **What will happen to the results of the research study?**

The answers given cannot be traced back to the student that filled in the forms. All information is recorded anonymously and therefore your clinical grades will not be affected. The data will be accessed by my supervisors and me. The data

will be stored on the computer at home, secured by a password. Tapes will be stored in a locked filing cabinet. The results of the research study will be submitted in my dissertation. In addition the research will be published in academic journals concerned with nursing education and the findings will be presented at conferences. Summary of the research findings will be made available to the Principle and Head of the Division and Nursing Department when the research is completed. Additionally, a summary of the results will be made available to the students through the College's newsletter.

**Benefits of the study:**

There is no personal benefit for the student. The information will be used to provide nursing educators with an understanding of the overall clinical learning environment so to encourage a positive learning environment.

**Risks:**

There is no foreseeable risk or discomforts associated with this study.

**Confidentiality:**

All information is recorded anonymously and therefore your clinical grades will not be affected. Please note the data collected will be used for research purposes only.

**Contact for further information**

Sonia Watson-Miller

Nursing Department, Barbados Community College, St. Michael.

Tel: 426-2858

Email: christeen70@hotmail.com

## Appendix L: Qualitative interview consent form

### INTERVIEW CONSENT FORM

#### Name of the research study

Students' perceptions of the Clinical Learning Environment: a study of Barbadian Student Nurses using a Mixed-Methods Analysis.

#### Name of researcher

Sonia Watson-Miller, Doctoral student

#### Contact information

Nursing Department, Barbados Community College Tel: 426-2858

Email: christeen70@hotmail.com

#### Declaration

##### Please circle the best response.

I have read the participant information sheet.                      Yes                      No

I have been given the opportunity to ask questions about the study and have received satisfactory answers to questions, and any additional details requested.

Yes                      No

I understand that participation is voluntary. I can withdraw at any time.

Yes                      No

I understand that this project has been reviewed by, and received ethics clearance through, the School Research Ethics Approval Panel (SREAP) of the University of Bath.

Yes                      No

I understand who will have access to personal data provided, how the data will be stored, and what will happen to the data at the end of the project.

Yes                      No

I hereby agree to participate in the study.                      Yes                      No

Signature of participate: .....

PRINT full name: ..... Date: .....

Researcher's signature: .....

PRINT full name:..... Date: .....

## Appendix M: An example of a section of a coded transcript

Transcript	Code
SWM: Imagine that the ward you worked on was an ideal learning environment. Can you describe it to me? What would it entail?	
Student 4: <b>It would entail having adequate supplies</b> , not having to go to another ward to borrow. Um..., <b>nurses who are willing to work with the students and take special interest</b> in them. Um...those are the two main things that are missing, <b>lack of supplies</b> and <b>genuine interest being shown by the nurses</b> .	Ideal situation  Resources  Nurses   Resources  Nurses
SWM: Is there anything else	
Student 4: Not that I can think of at this point in time.	
SWM: You mentioned "nurse who are willing to work with students and take special interest in them. Can you elaborate on this please?	
Student 4: O.k., sometimes the students work with particular staff nurses and	I/we, the student



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<p><b>we get the distinct impression that we are simply being tolerated</b> because we have to be there. However <b>with other nurses the attitude is very different and they really seem to care. They are interested in trying to help the student</b> to understand, learn and succeed.</p>	<p>Staff nurses</p> <p>Attitude</p> <p>Staff nurses</p>
SWM: Is that what you would like to see?	
<p>Student 4: Yes. <b>It is uncomfortable being tolerated</b> because I am assigned to a ward and that means that <b>they should include me in procedures</b>. Apart from this <b>there is no sense of a caring attitude</b>.</p>	<p>Attitude</p> <p>Skills</p> <p>Attitude</p>
SWM: O.k., can we go back to the actual ward for a moment? Describe the atmosphere on the ward in terms of interpersonal relationships among staff and students.	
<p>Student 4: The <b>interpersonal relationship among the staff was not good at all</b>.</p>	<p>Relationship</p> <p>Staff</p>

Transcript	Code
SWM: In what way?	
<p>Student 4: Sometimes while working on one shift we (students) would <b>hear complaints and gossip about the staff of another shift</b>. You now....Sometimes they remark that they are planning to leave extra work for those coming in on later shifts simply for unknown reasons. <b>I did not like hearing these conversations.</b></p>	<p>Relationship</p> <p>I did not like</p>
SWM: How did this influence your learning experience on the ward?	
<p>Student 4: After this experience, <b>I hoped not to be assigned to that ward after graduation. I felt sad. The nurses are supposed to work as a team, suppose to be working together irrespective of the shifts. They should be able to work together and resolve their problems.</b> I recall an instance where a <b>Sister remarked, "I am not taking over the ward until all those urinals are empty"</b>. Apparently <b>the team coming onto the</b></p>	<p>Don't want to work on that ward after graduation</p> <p>Felt sad</p> <p>Nurses</p> <p>Teamwork</p> <p>Sister</p> <p>Teamwork</p> <p>Nurses</p> <p>I/we, the student</p>

Transcript	Code
<p><b>ward noticed that the urinals were not emptied and this triggered a bit of conflict between the nurses. I assumed this would contribute to reduced patient care.</b></p> <p>Actually a better phrase here might be <b>“inadequate attention to patients”</b>. If staff are coming onto the ward and <b>they are stressed, they cannot give the patient the kind of attention, the kind of interaction that should be given</b> (pause), thus <b>there are aspects of patient care that may become deficient.</b></p>	<p>Patient care</p> <p>Conflict, nurses</p> <p>Staff</p> <p>Interaction</p> <p>Patient care</p> <p>Staff</p> <p>Patient care</p>
<p>SWM: Let us return to the ideal environment on the ward. What roles do the ward sister, the supervising nurse and the clinical instructor have on your learning in this ideal learning environment?</p>	
<p>SWM: Let's look at each individual separately. Let's start with the ward sister. What would be the ward sister's role in this ideal setting?</p>	
<p>Student 4: The <b>ward sister's role</b> is mainly to</p>	<p>Sister</p>

Transcript	Code
ensure proper communication with staff and between staff. Sometimes communication is not good at all.	Communication
SWM: Describe how it should be in the ideal setting.	
Student 4: In an ideal setting there should be adequate and effective communication.	Ideal situation Communication
SWM: Amongst whom should the adequate and effective communication take place?	
Student 4: <b>The Sister and the nurses, the sister and the student nurses, the nurses and the student nurses.</b> On one occasion the <b>sister came in and said, “Oh the students who have placed their bags on my desk go and remove them immediately”.</b> This was very embarrassing to the students and may not be the correct way to address individuals.	Sister Nurses Student nurses Communication  Embarrassing Communication